

OREGON TECH

PROJECT ADDRESS

200 Commercial Street Klamath Falls, OR 97601

PROJECT SUMMARY:

PROJECT CONSISTS OF INTERIOR RENOVATIONS & SITEWORK INTENDED FOR USE AS MENTAL AND BEHAVHIORAL HEALTH CLINIC.

PLANNING INFORMATION:

MAP & TAX LOT: 38S09E32AA TAX LOT 01900 SUBDIVISION LOT & BLOCK: CANAL ADDITION LOTS 1, 17 18 & 19 IN BLOCK 4 ZONING: GENERAL COMMERCIAL LOT AREA: 19,503 SF

PROJECT TEAM

OREGON INSTITUTE OF TECHNOLOGY 3201 Campus Drive Klamath Falls, Oregon 97601 (541) 885 1661 Thom Darrah thom.darrah@oit.edu

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MECHANICAL / ELECTRICAL LUMBING ENGINEERS INTERFACE ENGINEERING 6100 SW Main Street, Suite 1600 Portland, OR 97204 (503) 382 2661 Steve Dacus stevedk@interfaceeng.com

APPLICABLE CODES

2022 OREGON STRUCTURAL SPECIALTY CODE 2021 OREGON ENERGY EFFICIENCY SPECIALTY CODE 2022 OREGON MECHANICAL SPECIALTY CODE 2023 OREGON PLUMBING SPECIALTY CODE 2023 OREGON ELECTRICAL SPECIALTY CODE 2022 OREGON FIRE CODE

DEFERRED SUBMITTALS

REFER TO SPECIFICATION SECTION 01 1150 FOR BIDDER DESIGN REQUIREMENTS FOR BOTH AHJ REVIEW ITEMS AND NON-AHJ DEFFERRED ITEMS. SUBMITTAL DOCUMENTS FOR AHJ DEFERRED SUBMITAL ITEMS SHALL BE SUBMITED TO THE ARCHITECT OF RECORD BY THE GENERAL CONTRACTOR. ARCHITECT AND APPROPRIATE ENGINEER OF RECORD SHALL REVIEW AND RETURN. THE GENERAL CONTRACTOR SHALL THEN FORWARD AHJ SUBMITTAL ITEMS TO THE BUILDING OFFICAL FOR AHJ APPROVAL WITH A NOTATION INDICATING THAT THE DEFERRED SUBMITTAL DOCUMENTS HAVE BEEN REVIEWED AND THAT THEY HAVE BEEN FOUND IN GENERAL CONFORMANCE WITH THE DESIGN OF THE BUILDING. THE AHJ DEFERRED SUBMITAL ITEMS SHALL NOT BE INSTALLED UNTIL THEIR DESIGN AND SUBMITAL DOCUMENTS HAVE BEEN APPROVED BY THE BUILDING OFFICIAL.

AUTHORITY HAVING JURISDICTION (AHJ) DEFFERRED SUBMITTAL ITEMS:

A. FIRE ALARM SYSTEM B. STRUCTURAL

SEE SPECIFICATION SECTION 01 1150 SUBMITTAL REQUIREMENTS FOR NON-AHJ BIDDER DESIGNED/ENGINEERED ITEMS.

- TO INSTALLATION.
- INSTALLATION.
- WITH ARCHITECTS.
- PRIOR TO PROCEEDING
- PRIOR TO PROCEEDING

- REQUIREMENTS.

- INSPECTION AUTHORITY.

PROJECT NOTES

THE CONSTRUCTION CONTRACT IS FOR THE CONSTRUCTION OF A COMPLETE AND FULLY FUNCTIONING INSTALLATION. THESE DOCUMENTS DESCRIBE THE DESIGN INTENT AND SPECIFIC REQUIREMENTS OF THE INSTALLATION. THESE DOCUMENTS DO NOT INTEND TO SHOW EVERY ITEM REQUIRED TO CONSTRUCT THE WORK. ITEMS SUCH AS FASTENERS, CONNECTORS, FILLERS, MISCELLANEOUS CLOSURE ELEMENTS, ANCILLARY CONTROL WIRING AND POWER WHERE REQUIRED FOR THE CONTROL OR OPERATION OF THE PROVIDED EQUIPMENT ARE NOT ALWAYS SHOWN BUT ARE CONSIDERED INCLUDED IN THE SCOPE OF THE WORK. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE A FULLY FUNCTIONING INSTALLATION WHICH MEETS THE DESIGN INTENT, INCLUDING THE SPECIFIC REQUIREMENTS INCLUDED IN THESE DOCUMENTS

ALL ITEMS IN THESE DOCUMENTS ARE NEW UNLESS OTHERWISE NOTED THESE DOCUMENTS DESCRIBE A SINGLE CONSTRUCTION CONTRACT. THE USE OF SUBCONTRACTORS IS THE ELECTION OF THE CONTRACTOR. THESE DOCUMENTS DO NOT INTEND TO DIVIDE THE WORK AMONG THE CONTRACTOR'S SUBCONTRACTORS. WHERE THE DOCUMENTS IDENTIFY WORK WHICH IS "NOT IN MECHANICAL WORK" OR "NOT IN ELECTRICAL WORK" IT MEANS THAT WORK IS NOT FURTHER DESCRIBED OF SPECIFIED IN THE MECHANICAL OR ELECTRICAL DRAWINGS OR SPECIFICATIONS. 17 DOES NOT PRECLUDE THE CONTRACTOR FROM DELEGATING THE WORK TO THE ENTITIES OF HIS ELECTION. IN ADDITION THE DIVISION OF THE CONTRACT DOCUMENTS INTO ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL AND OTHER DESIGN DISCIPLINES NEITHER DIVIDES THE WORK FOR THOSE DISCIPLINES

AS SHOWN ONLY IN THOSE DRAWINGS OR SPECIFICATIONS. ITEMS INDICATED IN THIS SET NOTED "BY OWNER" ARE NOT IN THE CONTRACT (N.I.C.) UNLESS OTHERWISE NOTED, IT IS THE RESPONSIBILITY OF THE GENERA CONTRACTOR AND THE SUBCONTRACTORS TO REVIEW ALL DRAWINGS. PROJECT MANUAL, ADDENDA, ETC. IN ORDER TO ASSURE THE COORDINATION OF ALL WORK AFFECTING EACH TRADE. FAILURE TO REVIEW AND COORDINATE ALL CONTRACT

DOCUMENTS BY THE GENERAL CONTRACTOR WITH ALL THE SUBCONTRACTORS FOR APPLICABLE ITEMS OF THE WORK SHALL NOT RELIVE THE RESPONSIBLE PARTY FROM PERFORMING ALL WORK SO REQUIRED AS PART OF THE CONTRACT UNLESS OTHERWISE NOTED, THE PROJECT MANUAL, WHICH INCLUDES THE GENERAL CONDITIONS, SUPPLEMENTAL CONDITIONS, AND TECHNICAL SPECIFICATIONS, AND THE DRAWINGS ARE COMPLEMENTARY AND TOGETHER DESCRIBE THE PROJECT REQUIREMENTS. WHERE THERE ARE DISCREPANCIES BETWEEN THE PROJECT MANUAL AND THE DRAWINGS, THE CONTRACTOR SHALL ADVISE THE ARCHITECT AND REQUEST A CLARIFICATION. THE ORDER OF PRECEDENCE BETWEEN THE DRAWINGS AND THE PROJECT MANUAL IS AS DEFINED IN THE PROJECT MANUAL UNLESS OTHERWISE NOTED, THE CONTRACTOR SHALL LAYOUT AND SEQUENCE THE INSTALLATION OF THE WORK SO THAT THE DIFFERENT SYSTEMS DO NOT OBSTRUCT

THE INSTALLATION OF SUCCESSIVE WORK. IN GENERAL, SYSTEMS INSTALLED FIRST SHOULD BE KEPT AS HIGH AND TIGHT TO STRUCTURE AS POSSIBLE TO LEAVE SPACE AVAILABLE FOR SYSTEMS WHICH FOLLOW REFER TO THE PROJECT MANUAL FOR SPECIFICATIONS, GENERAL INFORMATION,

PRODUCTS AND EXECUTION REQUIREMENTS. REQUIREMENTS OF THE SPECIFICATIONS APPLY TO ALL ASPECTS OF THE WORK AND ARE INCLUDED AS ADDITIONAL INFORMATION FOR EACH ITEM SPECIFIED. IF DISCREPANCIES EXISTS BETWEEN THE SPECIFICATIONS AND DRAWINGS, THE MORE STRINGENT REQUIREMENTS SHALL PREVAIL. THE GENERAL CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVES OF ANY DISCREPANCIES

THE GENERAL CONTRACTOR AND ALL SUBCONTRACTORS WILL VISIT THE SITE PRIOR TO BIDDING IN ORDER TO FAMILIARIZE THEMSELVES WITH THE EXISTING SITE CONDITIONS AND THE IMPACT OF THE PROPOSED NEW WORK, INDICATED ON THE DRAWINGS AND SPECIFICATIONS, ON THESE CONDITIONS. ANY QUESTIONS REGARDING THE COORDINATION OF NEW WORK OR EXISTING CONDITIONS MUST BE SUBMITTED TO THE OWNER'S REPRESENTATIVE IN WRITING PRIOR TO BID SUBMISSION AND WITH ADEQUATE TIME FOR RESPONSE TO ALL BIDDERS. THE OWNER'S REPRESENTATIVE WILL RESPOND TO QUESTIONS. SUBMITTED IN A TIMELY

MANNER, WITH WRITTEN CLARIFICATIONS FORWARDED TO ALL BIDDERS. THE EXISTING DIMENSIONS AND CONDITIONS SHOWN ON THESE DRAWINGS ARE ASSUMED TO BE ACCURATE BASED ON AVAILABLE INFORMATION. THE CONTRACTOR SHALL, PRIOR TO THE START OF CONSTRUCTION, VERIFY ALL EXISTING CONDITIONS, PROVIDE A COMPLETE FIELD LAYOUT ON THE JOB SITE, AND NOTIFY THE OWNER'S REPRESENTATIVE OF ANY DEVIATIONS OR CONFLICTS WITH THESE DRAWINGS. 11. THE DRAWINGS SHALL NOT BE SCALED. THE GENERAL CONTRACTOR SHALL REFER TO THE DIMENSIONS INDICATED OR THE ACTUAL SIZES OF CONSTRUCTION ITEMS. WHERE NO DIMENSIONS OR METHOD OF DETERMINING A LOCATION IS GIVEN, VERIFY CORRECT DIMENSIONS OR LOCATION WITH THE OWNER'S REPRESENTATIVE PRIOR

12. THE DRAWINGS AND REFERENCED DETAILS HAVE BEEN DIMENSIONED IN ORDER TO ESTABLISH THE CONTROL AND GUIDELINES FOR FIELD LAYOUT. WHERE A DISCREPANCY EXISTS BETWEEN THE DRAWING AND THE DETAIL THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE FOR CLARIFICATION PRIOR TO

13. DIMENSIONS ARE TO FACE OF FINISH UNLESS OTHERWISE NOTED. 14. WHERE DIMENSIONS ARE NOTED TO BE VERIFIED IN THE FIELD (VIF) THE DIMENSION SHOWN IS THE DESIGN BASIS, BUT MAY DIFFER FROM ACTUAL CONDITIONS. CONTRACTOR SHALL VERIFY THESE DIMENSIONS WHILE LAYING OUT THE WORK AND REPORT ANY DISCREPANCIES BETWEEN THE DESIGN BASIS AND ACTUAL DIMENSIONS TO THE OWNER'S REPRESENTATIVE PRIOR TO PROCEEDING WITH THE WORK. WHERE DIMENSIONS ARE NOTED "+/-" FIELD DIMENSIONS MAY VARY FROM

THE NOTED DIMENSIONS BY MINOR AMOUNTS. IF THE CONTRACTOR IDENTIFIES DIMENSIONS IN THE FIELD THAT DIFFER BY MORE THAN 1" FROM THE +/- DIMENSIONS INDICTED IN THE DRAWINGS, THE CONTRACTOR SHOULD CONFIRM DIFFERENTIAL 15. INTERIOR DETAILS ARE KEYED TO THE PLANS AT TYPICAL LOCATIONS. TYPICAL DETAILS APPLY TO ALL LOCATIONS WHICH ARE SIMILAR BUT ARE NOT OTHERWISE DETAILED. THE CONTRACTOR AND SUBCONTRACTORS ARE RESPONSIBLE TO

COORDINATE THE LOCATION OF TYPICAL DETAILS AND INSTALL THE WORK INDICATED. IF DISCREPANCIES EXIST OR QUALIFICATION IS REQUIRED, THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE FOR CLARIFICATION INTERIOR FINISHES ARE KEYED TO THE DRAWINGS AT TYPICAL LOCATIONS. THE

FINISHES APPLY TO ALL LOCATIONS WHICH ARE SIMILAR BUT ARE NOT OTHERWISE DETAILED. CONTRACTOR AND SUBCONTRACTORS ARE RESPONSIBLE TO COORDINATE THE LOCATION ALL TYPICAL DETAILS AND INSTALL THE WORK INDICATED. IF DISCREPANCIES EXIST OR QUALIFICATION IS REQUIRED, THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE FOR CLARIFICATION

17. WALL FIRE RATING INDICATIONS ON THE FLOOR PLANS SHOW EXTENT OF FIRE RATED PARTITION. FIRE RATING IN A PARTITION SHALL CONTINUE OVER DOOR OR WINDOW OPENING WHETHER OR NOT THEY APPEAR IN PLAN. 18. IT IS THE GENERAL CONTRACTOR'S RESPONSIBILITY TO VERIFY SIZE AND INVERT

ELEVATION OF OPENINGS / SLEEVES THROUGH CONCRETE AND MASONRY WALLS AND CONCRETE FOUNDATION WALLS. OPENINGS / SLEEVES ARE NOT LIMITED TO THOSE SHOWN ON STRUCTURAL DRAWING SHEETS. 19. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO COORDINATE AND

MAKE PROVISIONS FOR ALL PIPE / CONDUIT SLEEVES THROUGH CONCRETE WALLS 20. ELEVATIONS ARE TO TOP OF CONCRETE OR OTHER HARD SURFACE MATERIAL. DO NOT SCALE DRAWINGS. USE DIMENSIONS INDICATED. 21. DETAILS ARE INTENDED TO SHOW METHOD AND MANNER OF ACCOMPLISHING THE

WORK, MINOR MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR CONDITIONS AND SHALL BE INCLUDED AS PART OF THE WORK. 22. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS AND EXISTING CONDITIONS AT THE SITE BEFORE COMMENCING WORK AND REPORT ANY DISCREPANCIES TO THE ARCHITECT PRIOR TO START OF THE WORK. IN CASE OF CONFLICT BETWEEN ARCHITECTURAL AND CONSULTANTS DRAWINGS, THE ARCHITECT WILL DETERMINE THE CORRECT INTENTION OF THE WORK. 23. THE BUILDING SHALL BE PROVIDED WITH A FULL SPRINKLER SYSTEM COMPLYING WITH APPLICABLE CODES OF THE AUTHORITY HAVING JURISDICTION. 24. PROVIDE PEDESTRIAN PROTECTION AS NECESSARY AND AS REQUIRED BY THE

AUTHORITY HAVING JURISDICTION. 25. ALL CONSTRUCTION RELATING TO BUILDING. PARKING OR SITE DEVELOPMENT SHALL CONFORM TO STATE OF OREGON AND JURISDICTIONAL ACCESSIBILITY

26. THE CONTRACTOR SHALL COORDINATE ANY AND ALL REQUIREMENTS FOR OFF-SITE IMPROVEMENTS, INCLUDING BUT NOT LIMITED TO SIDEWALKS, DRIVEWAYS, CURBS, GUTTERS, UTILITIES, ETC. OFF SITE IMPROVEMENTS SHALL MEET THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION (AHJ).

27. NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES, SYMBOLS, AND TYPICAL DETAILS. SPECIFIC NOTES ON DETAILS APPLY TO SIMILAR CONDITIONS UNLESS NOTED OTHERWISE (UNO / UON). 28. ELEVATORS SHALL COMPLY WITH THE 'OREGON ELEVATOR SPECIALTY CODE'. 29. WHERE FIRE RATED OPENING PROTECTION IS REQUIRED. THE FIRE DOORS AND SMOKE AND DRAFT CONTROL ASSEMBLIES INSTALLED IN CORRIDOR OPENINGS

SHALL BE TESTED AND LABELED IN ACCORDANCE WITH OSSC CURRENT EDITION SECTION 714. IN ACCORDANCE WITH THE REQUIREMENTS OF THE LISTED ASSEMBLY, THE MANUFACTURER'S INSTALLATION INSTRUCTIONS SHALL BE PROVIDED WITH EACH ASSEMBLY FOR INSTALLATION AND FOR REVIEW BY THE

SHEET INDEX

01 - GENERAL

COVER SHEET G100 **PROJECT INFO** G101

02 - ARCHITECTURAL

- A101 SITE PLAN DEMO FLOOR AND CEILING PLANS A201 A202 FLOOR PLAN AND CEILING PLAN A301 SECTION, FINISH SCHEDULE AND DETAILS ENLARGED PLANS AND INTERIOR ELEVATIONS A401
- A801 DOOR SCHEDULE AND TYPES, DETAILS

03 - MECHANICAL

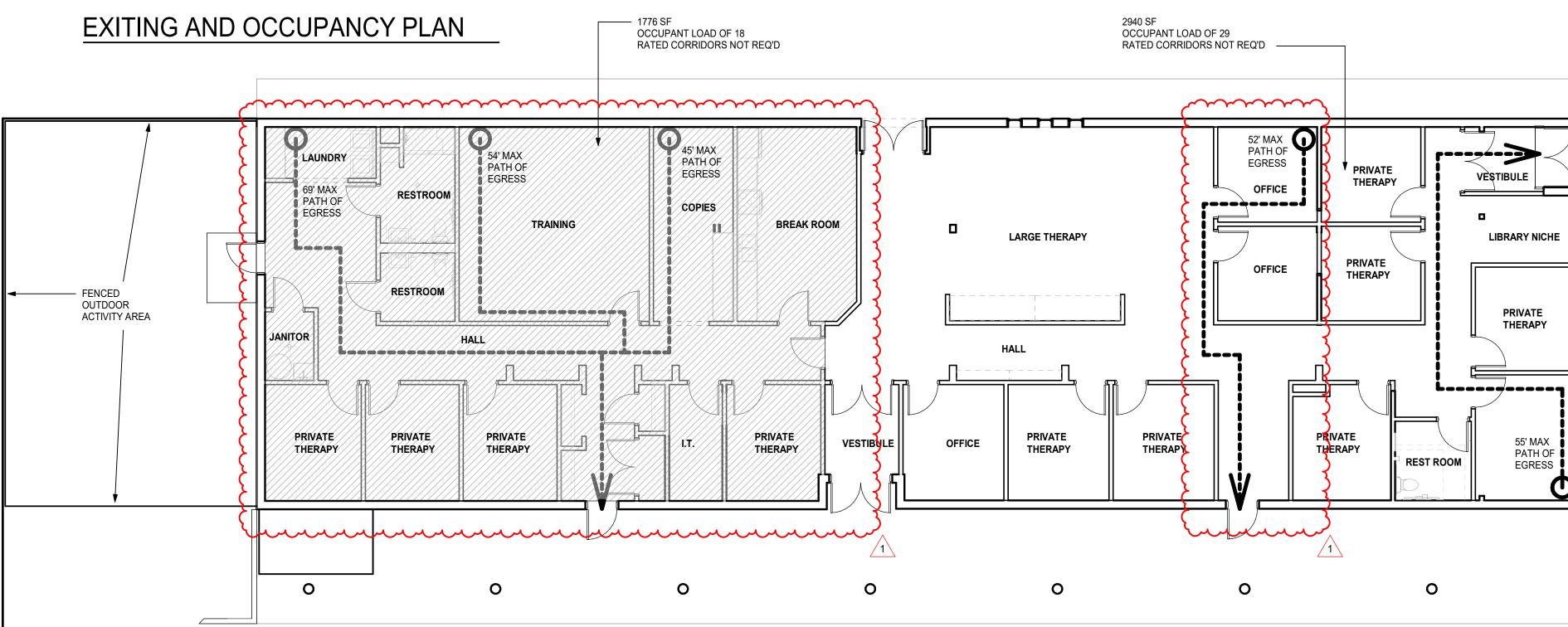
- SYMBOL LIST AND GENERAL NOTES MECHANICAL M001 M002 SCHEDULES - MECHANICAL M201 FLOOR PLAN - MECHANICAL
- M500 **DETAILS - MECHANICAL**

04 - ELECTRICAL

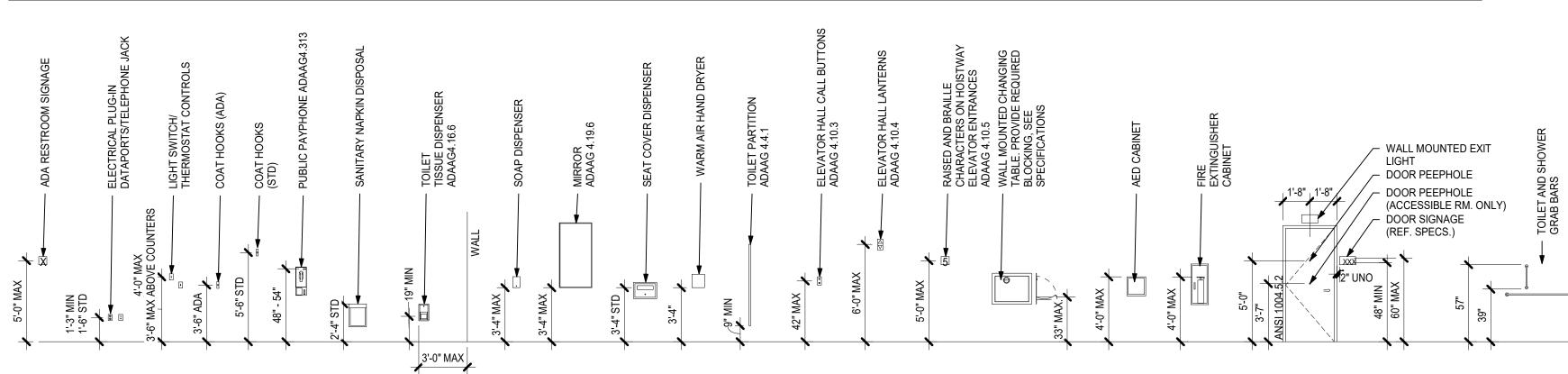
- SYMBOL LIST AND GENERAL NOTES ELECTRICAL E001
- E002 LUMINAIRE SCHEDULE & SEQUENCE OF OP.
- E201 CEILING PLAN - LIGHTING
- E301 FLOOR PLAN - POWER E501 **ONE LINE DRAWINGS & SCHEDULES - ELECTRICAL**
- E700 **DETAILS - ELECTRICAL**
- E800 **SPECIFICATIONS - ELECTRICAL**

05 - PLUMBING

- SYMBOL LIST AND GENERAL NOTES PLUMBING P001 P002 SCHEDULES - PLUMBING
- P200 **UNDERGROUND PLAN - PLUMBING**
- P201 **FLOOR PLAN - PLUMBING**

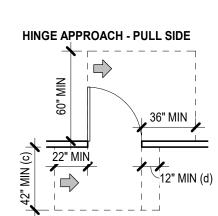


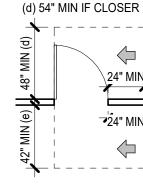
ADA MOUNTING HEIGHTS



ADA DOOR MANEUVERING CLEARANCES

FRONT APPROACH - PULL SIDE MIN -¢-++ ¹2" MIN (a) -





FRONT APPROACH - PUSH SIDE (a) IF BOTH CLOSER AND LATCH PROVIDED (b) 48" MIN IN EXISTING BUILDINGS

LATCH PROVIDED

HINGE APPROACH - PUSH SIDE (c) 48" MIN IF BOTH CLOSER AND (d) IF BOTH CLOSER AND LATCH PROVIDED

LATCH APPROACH - PUSH SIDE (e) 48" MIN IF CLOSER PROVIDED

CODE SUMMARY

EXISTING GROSS BUILDING AREA - 5163 SF EXISTING NET BUILDING AREA - 4716 SF

EXISTING OCCUPANCY - B

PROPOSED OCCUPANCY - B, OFFICE USE, WITH B NON-AMBULATORY OUTPATIENT CLINIC

EXISTING CONSTRUCTION TYPE - TYPE V-B, NO CHANGE PROPOSED **FIRE PROTECTION - NONE**

ALLOWABLE HEIGHT - 40' ACTUAL HEIGHT - 16

ALLOWABLE STORIES - 2 ACTUAL STORIES -

ALLOWABLE AREA - 9,000 BASE AREA, ALLOWABLE INCREASES FOR FRONTAGE NOT NEEDED ACTUAL AREA - 5163 SF

ACCESSIBLE PARKING

ORS 447.233 MANDATES THE NUMBER OF ACCESSIBLE PARKING SPACES BASED ON THE TOTAL NUMBER OF SPACES ON THE PROPERTY THIS PROPOSED PARKING LAYOUT CONTAINS LESS THAN 25 PARKING SPACES. SO 1 IS REQUIRED TO BE ACCESSIBLE AND MARKED FOR BOTH VAN ONLY AND WHEELCHAIR ONLY USE. VAN PARKING DIMENSIONS REQUIRE A 9 FOOT WIDE SPACE WITH AN ADJACENT 8 FOOT WIDE AISLE.

OCCUPANT LOAD: 4716 SF/100 OUTPATIENT CLINIC LOAD FACTOR (TABLE 1004.5) = 47

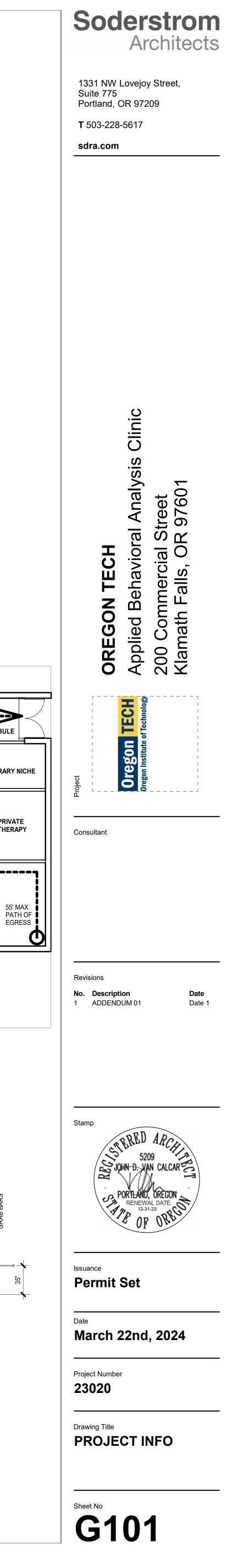
EXITING PER TABLE 1006.3.4. THE MAXIMUM ALLOWED EXIT ACCESS TRAVEL DISTANCE IS 75 FEET. DESIGN SHOWS EXITS WITH ACTUAL TRAVEL **DISTANCE AT 55 FEET**

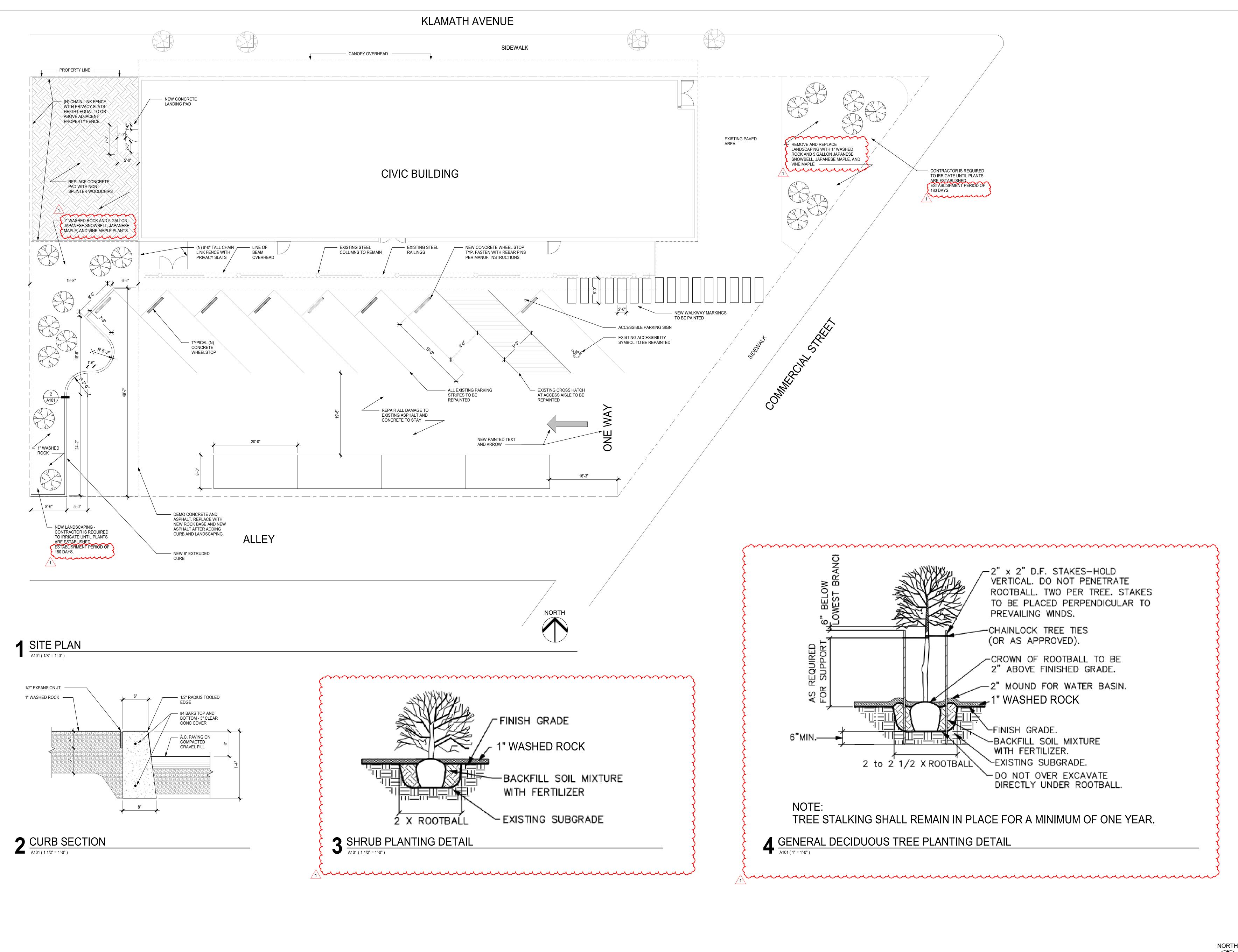
PLUMBING FIXTURES

PER TABLE 2902.1, A B OCCUPANCY REQUIRES 1 WATER CLOSET AND 1 LAVATORY FOR THE FIRST 50 IN THE OCCUPANT LOAD. THREE OF EACH ARE PROVIDED.

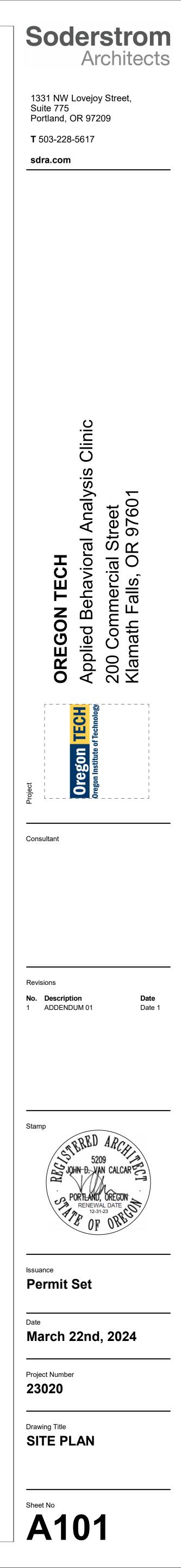
LATCH APPROACH - PULL SIDE (d) 54" MIN IF CLOSER PROVIDED

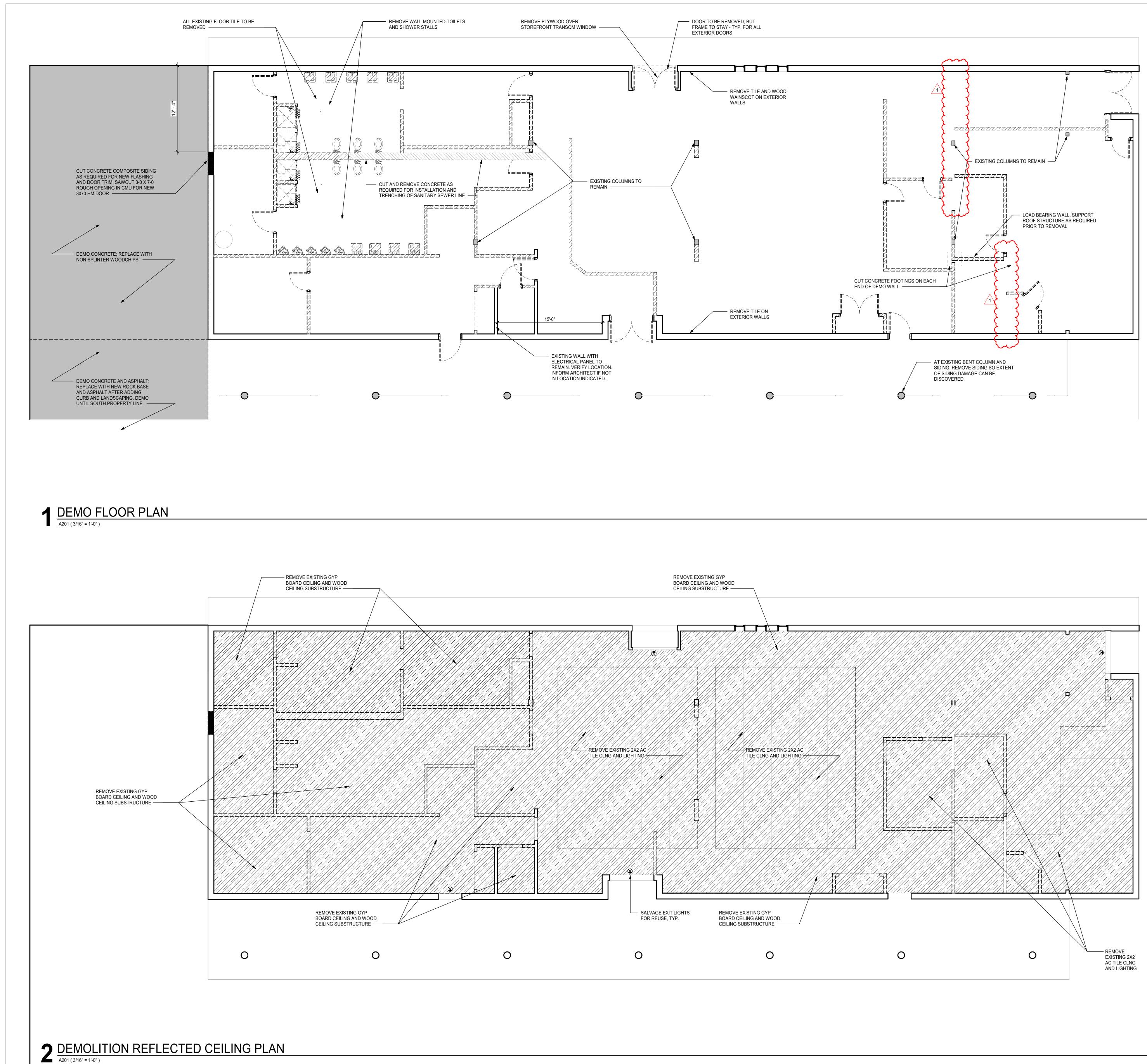
> \24" MIN 7 1 24" MIN²





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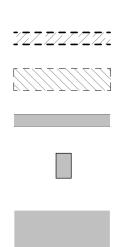


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DEMO FLOOR PLAN SHEET NOTES

- VERIFY EXTENT OF DEMOLITION WITH PROPOSED FLOOR PLANS.
 PATCH ALL EXISTING WALLS AS REQUIRED TO PROVIDE A SMOOTH SURFACE FOR NEW FINISHES.
 CONTRACTOR SHALL PROVIDE TEMPORARY PARTITION DUST BARRIERS IN ORDER TO MINIMIZE THE SPREAD OF DUST AND DEBRIS, AND TO PROTECT
- ADJACENT SPACES.4. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL DEMOLITION MATERIAL, IN ACCORDANCE WITH BUILDING OWNER / TENANT STANDARDS.
- 5. PULL ANY DEMOLISHED WIRING BACK TO THE NEAREST JUNCTION BOX AND CAP IN ACCORDANCE WITH CODE. IN WALLS TO BE REMOVED, REMOVE WALL BOXES AND CONDUIT.
- PULL ANY DEMOLISHED PLUMBING LINES BACK TO THE NEAREST POINT OF CIRCULATION AND CAP IN ACCORDANCE WITH CODE.
 REFER TO NON-ARCHITECTURAL SHEETS FOR ADDITIONAL DEMOLITION SCOPE.
 REMOVE ALL WALLS & DOORS INDICTAED BY DASHED LINES.
 REMOVE ALL FLOOR FINISHES ABOVE SUBFLOOR.
- 10. REMOVE ALL FLOORT INIGITED ABOVE SUBFLUOK.
 10. REMOVE EXISTING PLUMBING FIXTURES AND ASSOCIATED APPURTENANCES. ALSO REMOVE ALL UNUSED PIPING TO A POINT BEHIND OR BELOW FINISHED SURFACES AND CAP IN PLACE. MAINTAIN EXISTING PIPING WHERE NECESSARY FOR EXTENSION TO NEW FIXTURE LOCATIONS. REMOVE ALL EXISTING VENT PIPING THAT IS BELOW ROOF, MAINTAIN VTR LOCATIONS FOR NEW FIXTURE CONNECTION. PROTECT CLOSET BENDS WHERE NEW TOILETS WILL BE
- INSTALLED IN SAME LOCATIONS. 11. REMOVE WATER SUPPLY PIPING IN WALLS THAT ARE REMOVED. 12. REMOVE ALL MIRRORS.

LEGEND



WALL TO BE DEMOLISHED

PORTION OF CONCRETE TO BE DEMOLISHED

EXISTING COLUMN TO REMAIN

DEMO ASPHALT AND CONCRETE



DEMO RCP SHEET NOTES

REMOVE ALL CEILINGS AND SOFFITS EXCEPT FOR THOSE SHOWN.
 REMOVE ALL BULKHEADS.
 REMOVE EXISTING LIGHTING AND HVAC GRILLES IN CEILINGS.
 REMOVE ALL EXISTING MECHANICAL GRILLES AND LIGHT FIXTURES IN CEILINGS TO BE DEMOED.

LEGEND

ED
1

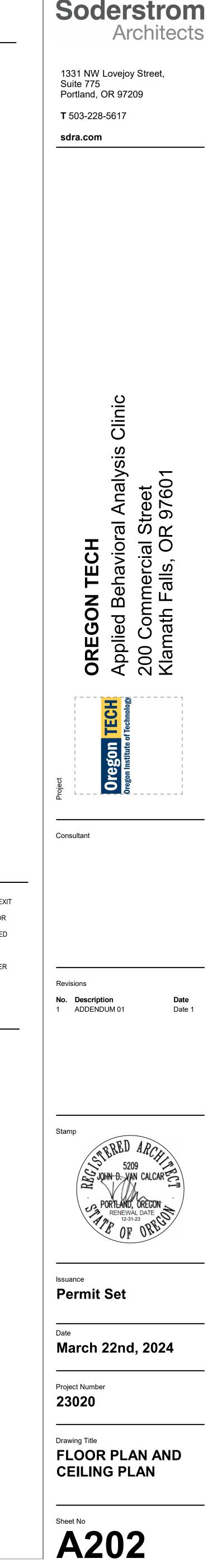


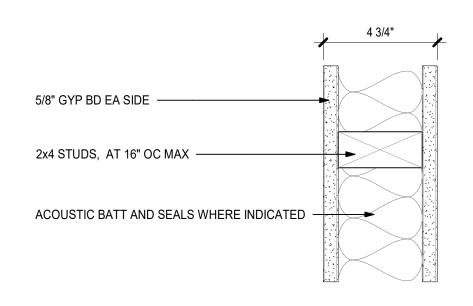




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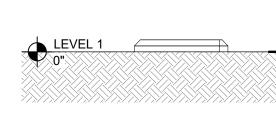
- 1. REFER TO ENGINEER'S DRAWINGS FOR LIGHT SWITCHING AND SPECIFICATION, EXIT SIGN LOCATIONS, AND ELECTRICAL AND MECHANICAL SYSTEMS.
- REPORT TO ARCHITECT ANY CONFLICTS BETWEEN ELECTRICAL, MECHANICAL, OR
- COMPONENTS NOT FULLY CONCEALED BEHIND A CONTINUOUS CEILING TO BE
- 4. ALL LIGHTS AND GRIDS ARE TO BE CENTERED IN ROOM, UON. 5. CONTRACTOR RESPONSIBLE FOR WOOD STRUCTURE FOR GYPSUM CEILINGS PER



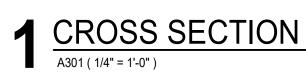


<u>LEVEL 2</u> 14'-0"

W01 TYPICAL INTERIOR PARTITION A301 (3" = 1'-0")



NOTE: SEE TABLES IN SECTION 2308.7.1 IN 2022 OSSC, "CEILING JOIST SPANS FOR COMMON LUMBER SPECIES" FOR CEILING JOISTS AND SPACING.



			RO	OM FI	NISH							
ROOM #					W	ALLS		_			LEGEND	
RO(ROOM NAME	FLOOR	BASE	NORTH	EAST	SOUTH	WEST	CEILING	CASEWORK	OTHER		
101	VESTIBULE	WOM	RB-1	GYP-1, PT	GYP-1, PT	EXST	GYP-1, PT	ACT			FINISH ABBREVIATIONS	
103	OFFICE	VSF	RB-1	GYP-1, PT	GYP-1, PT	EXST	GYP-1, PT	ACT				
104	PRIVATE THERAPY	VSF	RB-1	GYP-1, PT	GYP-1, PT	EXST	GYP-1, PT	ACT			ACT	ACOUSTIC CEILING TILE
105	PRIVATE THERAPY	VSF	RB-1	GYP-1, PT	GYP-1, PT	EXST	GYP-1, PT	ACT			EVOT	
107	PRIVATE THERAPY	VSF	RB-1	GYP-1, PT	GYP-1, PT	EXST	GYP-1, PT	ACT			EXST	EXISTING TO REMAIN
108	REST ROOM	VSF	RB-2	GYP-2, PT	GYP-2, PT	FRP-2, EXST	FRP-2, GYP-2, PT	ACT			FRP-1, FRP-2	FIBERGLASS REINFORCED PLASTIC
109	PRIVATE THERAPY	VSF	RB-1	GYP-1, PT	EXST	EXST	GYP-1, PT	ACT			GYP-1	GYPSUM BOARD
110	PRIVATE THERAPY	VSF	RB-1	GYP-1, PT	EXST	GYP-1, PT	GYP-1, PT	ACT			GYP-2	MOISTURE RESISTANT GYPSUM BOARD
111	LARGE THERAPY	VSF	RB-1	EXST	GYP-1, PT	GYP-1, PT	GYP-1, PT	ACT			GYP-3	CEILING GYPSUM BOARD
112	PRIVATE THERAPY	VSF	RB-1	EXST	GYP-1, PT	GYP-1, PT	GYP-1, PT	ACT			070	
113	PRIVATE THERAPY	VSF	RB-1	GYP-1, PT	GYP-1, PT	GYP-1, PT	GYP-1, PT	ACT			OTS	OPEN TO STRUCTURE
114	OFFICE	VSF	RB-1	GYP-1, PT	GYP-1, PT	GYP-1, PT	GYP-1, PT	ACT			PL-1	PLASTIC LAMINATE COUNTERTOP FINISH
115	OFFICE	VSF	RB-1	EXST	GYP-1, PT	GYP-1, PT	GYP-1, PT	ACT			PL-2	PLASTIC LAMINATE SHELVING FINISH
116	BREAK ROOM	VSF	RB-2	EXST	GYP-1, PT	GYP-1, PT	GYP-2, PT	ACT	PL-3		PL-3	PLASTIC LAMINATE CASEWORK FINISH
117	COPIES	VSF	RB-1	EXST	GYP-1, PT	GYP-1, PT	GYP-1, PT	ACT	PL-3		PT-1, PT-2, PT-3	PAINT
118	TRAINING	VSF	RB-1	EXST	GYP-1, PT	GYP-1, PT	GYP-1, PT	ACT			RB-1	RUBBER BASE
119	RESTROOM	VSF	RB-2	FRP-2, GYP-2, PT	FRP-2, GYP-2, PT	GYP-2, PT	GYP-2, PT	GYP-3			RB-2	MOISTURE RESISTANT RUBBER BASE
120	RESTROOM	VSF	RB-2	EXST	FRP-2, GYP-2, PT	FRP-2, GYP-2, PT	GYP-2, PT	GYP-3			VSF WOM	VINYL SHEET FLOORING WALK OFF MAT
121	LAUNDRY	VSF	RB-2	EXST	GYP-2, PT	GYP-2, PT	EXST	ACT	PL-3			
122	HALL	VSF	RB-1	GYP-1, PT	GYP-1, PT	GYP-1, PT	GYP-1, PT	ACT			NOTE: SEE SPECIFICATI	IONS AND FINISH SUMMARY MATRIX FOR MORE INFORMATION
123	JANITOR	EXST	RB-2	FRP-1, GYP-2, PT	FRP-1, GYP-2, PT	FRP-1, GYP-2, PT	EXST, FRP-1					
124	PRIVATE THERAPY	VSF	RB-1	GYP-1, PT	GYP-1, PT	EXST	EXST	ACT				
125	PRIVATE THERAPY	VSF	RB-1	GYP-1, PT	GYP-1, PT	EXST	GYP-1, PT	ACT				
126	PRIVATE THERAPY	VSF	RB-1	GYP-1, PT	GYP-1, PT	EXST	GYP-1, PT	ACT				
128	HALL	VSF	RB-1	GYP-1, PT	GYP-1, PT	EXST	GYP-1, PT	ACT				
129	ELECT.	EXST	RB-1	GYP-1, PT	EXST	EXST	GYP-1, PT	OTS				
130	I.T.	VSF	RB-1	GYP-1, PT	EXST	EXST	GYP-1, PT	ACT				
131	PRIVATE THERAPY	VSF	RB-1	GYP-1, PT	GYP-1, PT	EXST	EXST	ACT				
132	HALL	VSE	RB-1	GYP-1 PT	GYP-1.PT	GYP-1, PT	GYP-1 PT	ACT				
133	LIBRARY NICHE	VSF	RB-1	GYP-1, PT	GYP-1, PT	GYP-1, PT	-	ACT	3			
134	VESTIBULE	VSF	RB-1	GYP-1, PT	GYP-1, PT	GYP-1, PT	GYP-1, PT	ACT	1			
								1				

	8
	<u> </u>

CODE	DESCRIPTION	NOTES: REFER TO FINISH PLANS, U.O.N.	
PLASTIC LAMINATE CASEWORK	SECTION 06 4100		VS
PL-1	MANUFACTURER: WILSONART PRODUCT: HIGH PRESSURE LAMINATE, STANDARD PATTERN: NATURAL COTTON 4946 FINISH: 60 MATTE FINISH LOCATION: BREAK ROOM #116, COPIES #117, LAUNDRY #121	COUNTERTOP	
PL-2	MANUFACTURER: WILSONART PRODUCT: HIGH PRESSURE LAMINATE, STANDARD PATTERN: NATURAL COTTON 4946 FINISH: 60 MATTE FINISH LOCATION: STORAGE NICHES - SEE INTERIOR ELEVATIONS	SHELVING	RU RB
PL-3	MANUFACTURER: WILSONART PRODUCT: HIGH PRESSURE LAMINATE, STANDARD PATTERN: SAP WALNUT 8221 FINISH: 60 MATTE FINISH LOCATION: BREAK ROOM #116, COPIES #117, LAUNDRY #121	VERTICAL CASEWORK NOTE: PATTERN SHOULD MATCH DIRECTION IN ALL APPLICATIONS	RB
FIBER REINFORCED PLASTIC	SECTION 06 8316		
FRP-1	MANUFACTURER: CRANE COMPOSITES PRODUCT: VARIETEX FRP WALL PANELS TEXTURE: LINEN THICKNESS: 0.09" COLOR: MORNING MIST GRAY 636 SIZE: 4' X 10', U.O.N. LOCATION: JANITOR #123	PROVIDE SATIN ANODIZED ALUMINUM J-CHANNEL TRIM PROVIDE MATCHING VERTICAL TRIM	w
FRP-2	MANUFACTURER: CRANE COMPOSITES PRODUCT: VARIETEX FRP WALL PANELS TEXTURE: LINEN THICKNESS: 0.09" COLOR: SOUTH BEACH IVORY SIZE: 4' X 10', U.O.N. LOCATION: RESTROOMS #108, #119, #120	PROVIDE SATIN ANODIZED ALUMINUM J-CHANNEL TRIM PROVIDE MATCHING VERTICAL TRIM	<u>РА</u> РТ-
PLASTER & GYPSUM BOARD	SECTION 09 2000		
GYP-1	GYPSUM WALL BOARD		PT
GYP-2	MOISTURE RESISTANT GYPSUM WALL BOARD		
GYP-3	CEILING GYPSUM BOARD	LOCATED AT RESTROOMS AND ADJUSTABLE SHELVES	ΙL
ACOUSTICAL CEILINGS	SECTION 09 5100		
ACT	MANUFACTURER: ARMSTRONG PRODUCT: 1915HRC SIZE: 24" X 48" THICKNESS: 3/4" LOCATION: ALL ROOMS EXCEPT JANITOR #123 AND RESTROOMS #108, #119, #120 AND ADJUSTABLE SHELVES		

GYP-1, PT GYP-1, PT GYP-1, PT

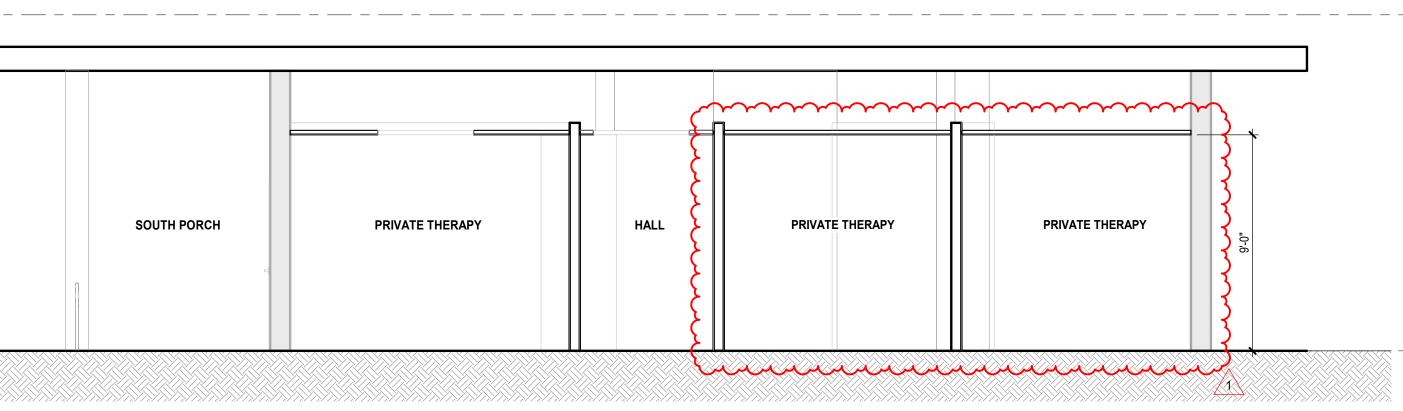
GYP-1, PT GYP-1, PT GYP-1, PT GYP-3

ACT

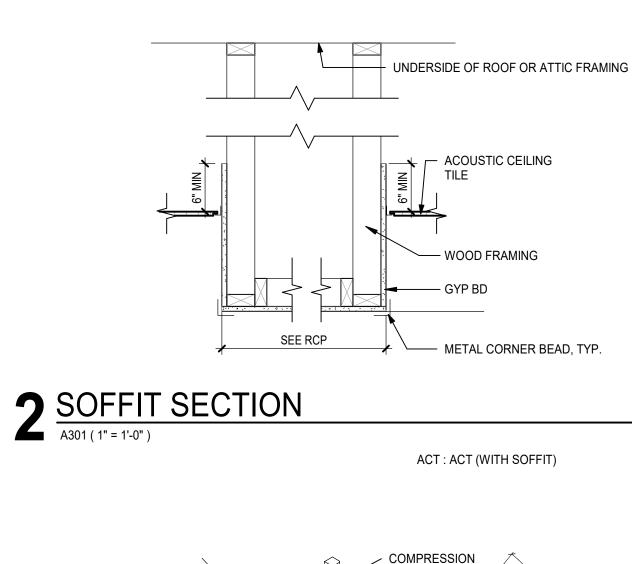
GYP-1 PT

GYP-1, PT

RR-1

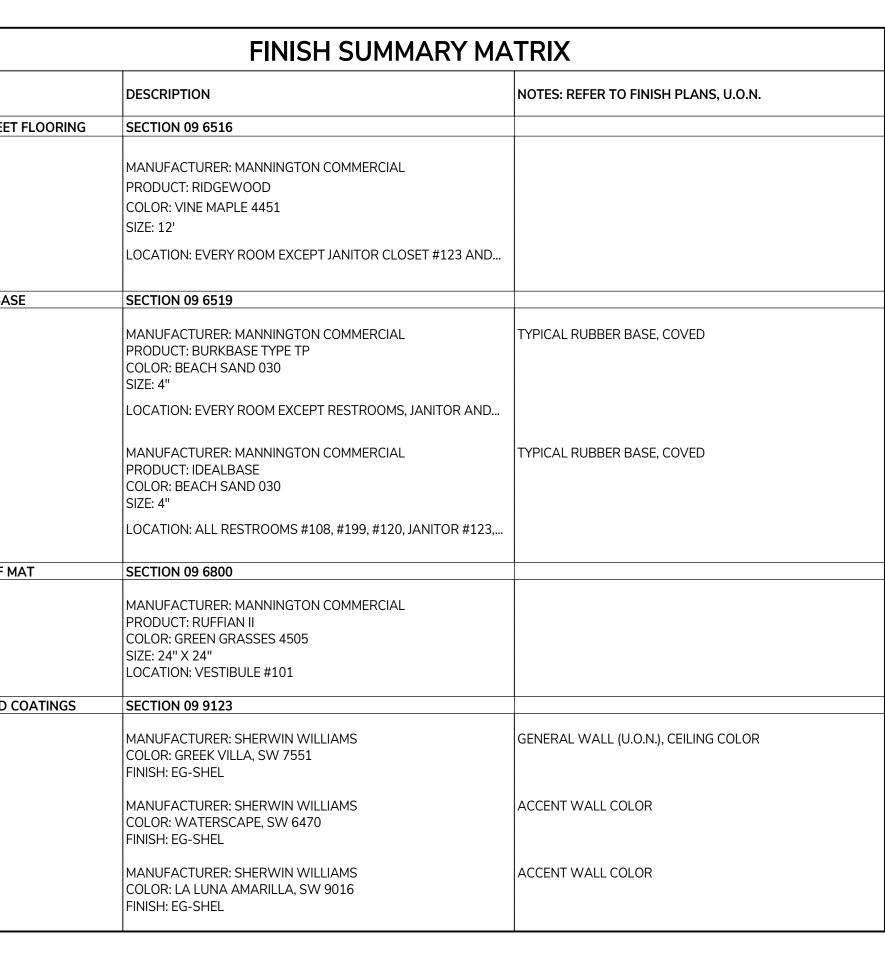


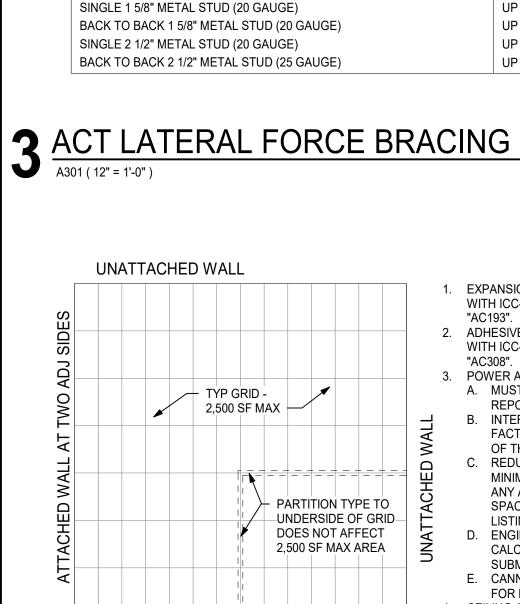
CROSS SECTION AT LARGE THERAPY ROOM



MAIN RUNNER

MAXIMUM RECOMENDED LENGTHS FOR VERTICAL STRUTS





NO. 12 GAGE

SUPPORT WIRE

AT 45° EACH WAY

CROSS RUNNER

EMT CONDUIT

1/2" EMT CONDUIT

3/4" EMT CONDUIT

1" EMT CONDUIT

METAL STUD

SUSPENDED CEILINGS WITH AREAS LESS THAN OR EQUAL TO 144 SF THAT ARE SURROUNDED BY WALLS OR SOFFITS THAT ARE LATERALLY BRACED TO THE

STRUCTURE MAY BE ATTACHED TO THE CLOSURE STRIP AT ALL FOUR SIDES.

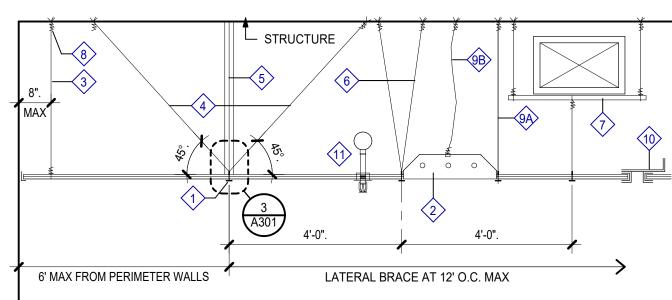
ATTACHED WALL AT TWO ADJ SIDES

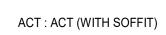




5 ACT SUSPENDED CEILING NOTES A301 (3/4" = 1'-0")

- (11) WHERE SPRINKLER HEADS AND OTHER PENETRATIONS OCCUR, PROVIDE 2 INCH OVERSIZED ESCUTCHEON OR ADAPTER TO ALLOW AT LEAST 1 INCH MOVEMENT IN ALL HORIZONTAL DIRECTIONS, OR PROVIDE STANDARD ESCUTCHEON AND PENETRATIONS WITH FLEXIBLE HEAD CONNECTIONS.
- PARTITION.
- 100 PERCENT OF LIGHT FIXTURE WEIGHT ACTING IN ANY DIRECTION. PROVIDE SEISMIC JOINTS WHERE CEILING AREA EXCEEDS 2,500 SQ. FT. OR PROVIDE FULL HEIGHT
- WIRES MUST BE TAUT.
- D. LIGHT FIXTURES TO BE POSITIVELY ATTACHED TO GRID SYSTEM. ATTACHEMENT DEVICE TO CARRY
- B. LIGHT FIXTURES WEIGHING LESS THAN 56 LBS. REQUIRE (2)-NO. 12 GA. SLACK WIRES FROM FIXTURE HOUSING TO STRUCTURE ABOVE. C. LIGHT FIXTURES IN EXCESS OF 56 LBS. TO BE SUPPORTED DIRECTLY FROM STRUCTURE ABOVE,
- A. WITH SUSPENSION SYSTEM, NO. 12 GA. HANGERS TO BE ATTACHED TO GRID. MEMBERS WITHIN 3 INCHES OF EACH CORNER OF EACH FIXTURE - TANDEM FIXTURES MAY USE COMMON WIRES.
- COMPONENT OF LATERAL FORCE BRACING DETAIL. FOLLOW MANUFACTURER'S DIRECTION FOR EMBEDMENT INTO STEEL. 9 LIGHT FIXTURE SUPPORT
- ATTACHED WITH THE FOLLOWING PAF HILTI X-U EMBED 3/4 " (ESR-2269) OR SIMPSON PDP EMBED 3/4 " (ESR-2138). ANCHOR LOAD HANGER WIRE SHALL NOT EXCEED 90 LBS. PAFs MAY NOT BE USED FOR ANY
- DEVICE. TRAPEZE SUSPENSION FOR SPANS EXCEEDING 48 INCHES TO BE MINIMUM OF BACK-TO-BACK 1-1/4 INCH COLD ROLLED CHANNELS. A HANGER WIRE ATTACHMENT TO CONCRETE, STEEL OR CONCRETE OVER METAL DECK MAY BE
- 6 SYSTEM HANGERS MORE THAN 1:6 OUT OF PLUMB, PROVIDE COUNTER SLOPE HANGERS. WHERE HANGER WIRES ARE NOT POSSIBLE DUE TO OBSTUCTIONS, PROVIDE TRAPEZE OR EQUIVALENT
- (5) COMPRESSION STRUT AT EACH LATERAL GRID BRACING LOCATION. STRUT TO BE ADEQUATE TO RESIST VERTICAL FORCE COMPONENT INDUCED BY BRACING WIRES, SPACED 12 FEET ON CENTER IN BOTH DIRECTIONS. STRUT TO BE COMPATIBLE WITH SUSPENSION SYSTEM.
- 4 WHERE CEILINGS EXCEED 1000 SF, GRID LATERAL FORCE BRACING IS REQUIRED. GRID LATERAL FORCE BRACING AT 12'-0" OC EACH WAY: BEGIN WITHIN 6 FEET OF PERIMETER AND WITHIN 2 INCHES OF CROSS RUNNER INTERSECTION. PROVIDE FOUR (4) - NO. 12 GA. WIRES SECURED TO MAIN RUNNER AND SPLAYED 80 DEGREES FROM EACH OTHER AT AN ANGLE NOT EXCEEDING 45 DEGREES FROM CEILING PLANE.
- $\langle 3 \rangle$ hanger wire system to begin within 8 inches of perimeter wall.
- CROSS RUNNERS: RUNNERS SUPPORTED BY MAIN RUNNERS AND CAPABLE OF CARRYING DESING LOAD WITH DEFLECTION EQUAL TO 1/360 OF ITS SPAN OR LESS.
- MAIN RUNNERS: 4 FEET O.C., SUPPORTED WITH NO. 12 GA. WIRES AT 4 FEET O.C. (OR NO. 10 GA. WIRES AT 5 FEET O.C.). HANGER ATTACHEMENT TO BE DESIGNED TO SUPPORT NOT LESS THAN 200 POUNDS.
- INSTALLATION:
- AS INDICATED IN SPECIFICATION.
- **GRID SYSTEM REQUIREMENTS:**





UP TO 5'-10"

UP TO 7'-8"

UP TO 9'-9"

UP TO 12'

UP TO 15'

UP TO 15'

UP TO 13'-6"

EXPANSION ANCHORS MUST COMPLY

WITH ICC-ES ACCEPTANCE CRITERIA

WITH ICC-ES ACCEPTANCE CRITERIA

ADHESIVE ANCHORS MUST COMPLY

3. POWER ACTUATED FASTENERS (PAF)

A. MUST HAVE CURRENT ICC-ES

B. INTERIOR WALLS: INCREASE

OF THE LISTED VALUE).

ENGINEERING DESIGN

. CEILING AREA LIMIT BASED ON

SEISMIC DESIGN CATEGORY C.

DESIGN CATEGORY D-F CEILING

CALCULATIONS MUST BE

E. CANNOT BE USED IN TENSION

FOR LOADS EXCEEDING 90 LBS

REDUNDANCY REQUIRED.

FACTOR OF SAFETY TO 2:1 (50%

MINIMUM 3 PAFs INSTALLED IN

ANY APPLICATION. MINIMUM

SPACING SHALL BE PER PAF

"AC193".

"AC308".

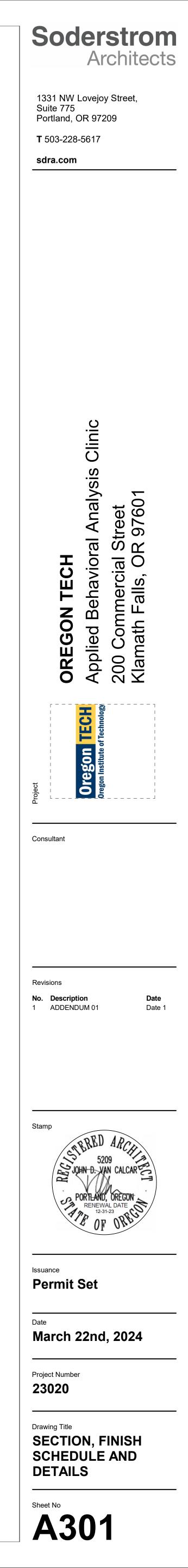
REPORT.

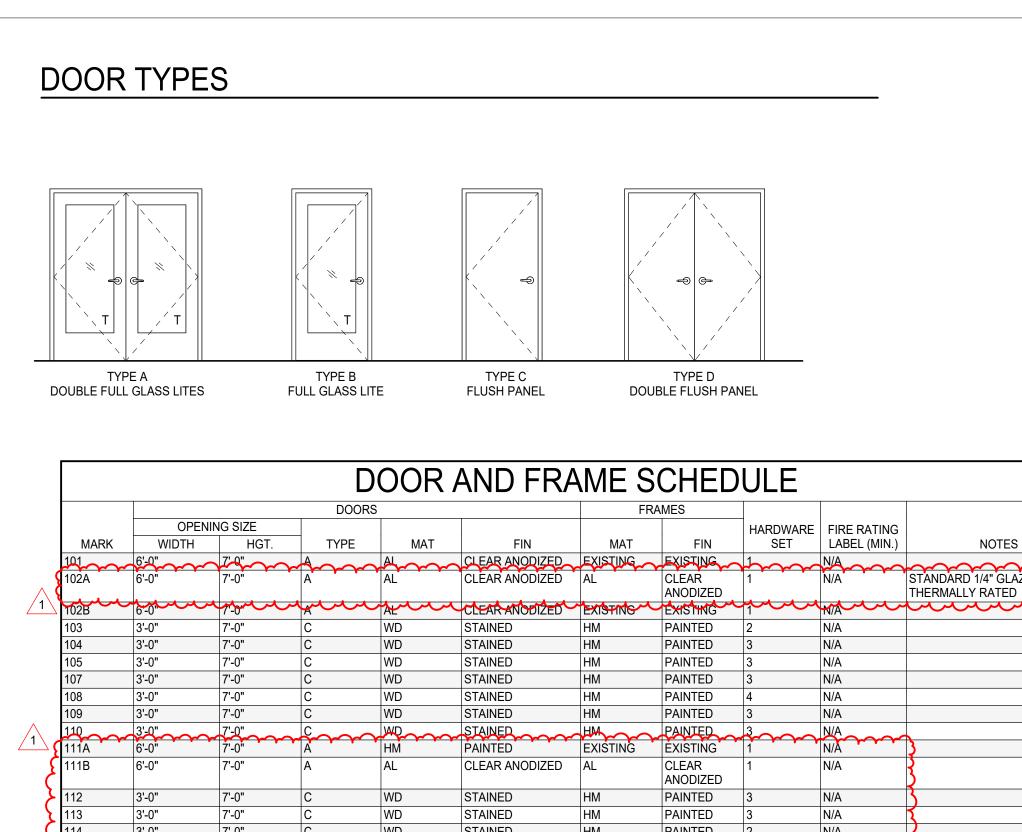
LISTING.

SUBMITTED.

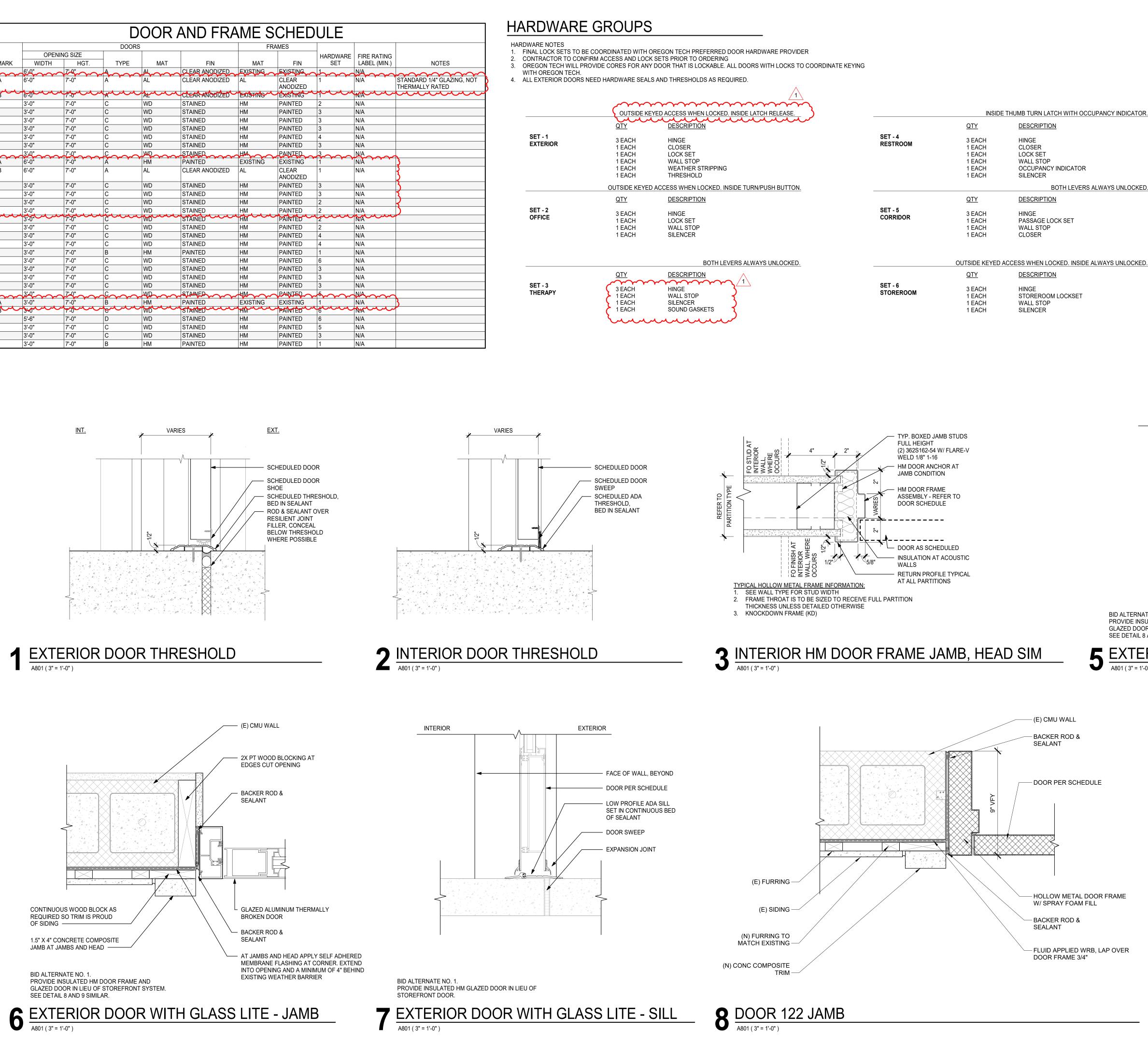
AREA LIMIT IS 1,000 SF.

STRUT



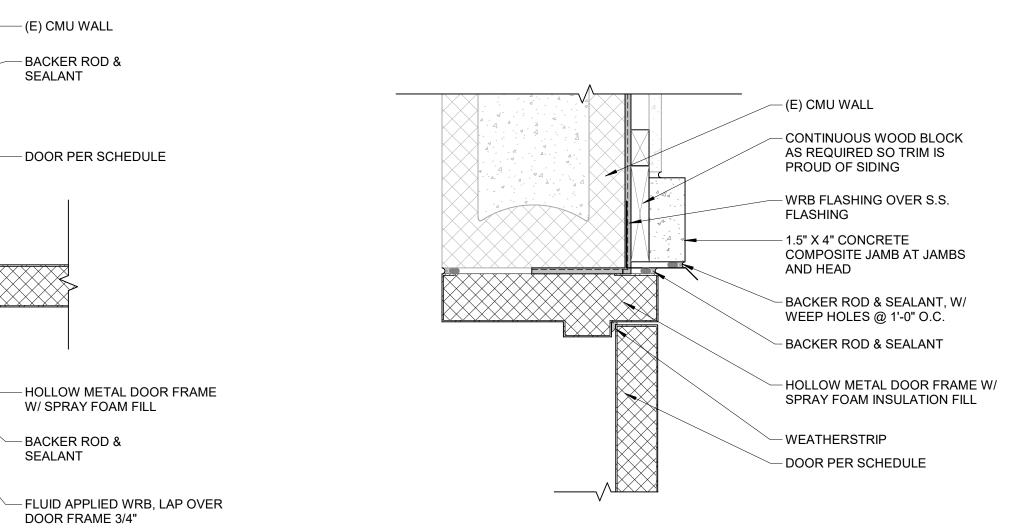


MARK	WIDTH	HGT.	TYPE	MAT	FIN	MAT	FIN	SET	LABEL (MIN.)	NOTES
101	6'-0"	Z'-Q"	A	AL	CLEAR ANODIZED	EXISTING	EXISTING	1	N/A	\sim
102A	6'-0"	7'-0"	A	AL	CLEAR ANODIZED	AL	CLEAR ANODIZED	1	N/A	STANDARD 1/4" GLAZING, NOT THERMALLY RATED
102B	6-0h	pron ~	And	AL	CLEAR ANODIZED	EXISTING	EXISTING	1	M/A	
103	3'-0"	7'-0"	С	WD	STAINED	HM	PAINTED	2	N/A	
104	3'-0"	7'-0"	С	WD	STAINED	HM	PAINTED	3	N/A	
105	3'-0"	7'-0"	С	WD	STAINED	HM	PAINTED	3	N/A	
107	3'-0"	7'-0"	С	WD	STAINED	HM	PAINTED	3	N/A	
108	3'-0"	7'-0"	С	WD	STAINED	HM	PAINTED	4	N/A	
109	3'-0"	7'-0"	С	WD	STAINED	HM	PAINTED	3	N/A	
110	3'-0"	7'-0"	C	WD	STAINED	HM	PAINTED	3	N/A	
111A	6'-0"	7'-0"	A	HM	PAINTED	EXISTING	EXISTING	1	N/A	3
111B	6'-0"	7'-0"	A	AL	CLEAR ANODIZED	AL	CLEAR ANODIZED	1	N/A	}
112	3'-0"	7'-0"	С	WD	STAINED	HM	PAINTED	3	N/A	3
113	3'-0"	7'-0"	С	WD	STAINED	НМ	PAINTED	3	N/A	₹
114	3'-0"	7'-0"	С	WD	STAINED	НМ	PAINTED	2	N/A	$\mathbf{\lambda}$
115	3'-0"	7'-0"	C	WD	STAINED	HM	PAINTED	2	N/A	5
116	3'-0"	7'-0"	cun	WD	STAINED	HM	PAINTED	zun	N/A	
118	3'-0"	7'-0"	С	WD	STAINED	HM	PAINTED	2	N/A	
119	3'-0"	7'-0"	С	WD	STAINED	HM	PAINTED	4	N/A	
120	3'-0"	7'-0"	С	WD	STAINED	HM	PAINTED	4	N/A	
122	3'-0"	7'-0"	В	HM	PAINTED	HM	PAINTED	1	N/A	
123	3'-0"	7'-0"	С	WD	STAINED	HM	PAINTED	6	N/A	
124	3'-0"	7'-0"	С	WD	STAINED	HM	PAINTED	3	N/A	
125	3'-0"	7'-0"	С	WD	STAINED	HM	PAINTED	3	N/A	
126	3'-0"	7'-0"	С	WD	STAINED	HM	PAINTED	3	N/A	
127	3'-0"	7'-0"	<u>C</u>	WD	STAINED	HM ~~~~	PAINTED	5	NA	
128A	3'-0"	7'-0"	В	НМ	PAINTED	EXISTING	EXISTING	1	N/A	3
128B			enn	WD	STAINED	HM	PAINTED	6 min	NA	
129	5'-6"	7'-0"	D	WD	STAINED	HM	PAINTED	6	N/A	
130	3'-0"	7'-0"	С	WD	STAINED	НМ	PAINTED	5	N/A	
131	3'-0"	7'-0"	С	WD	STAINED	НМ	PAINTED	3	N/A	
132	3'-0"	7'-0"	В	НМ	PAINTED	НМ	PAINTED	1	N/A	



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9 DOOR 122 HEAD A801 (3" = 1'-0")



- BACKER ROD &

(E) CMU WALL

(N) CONC COMPOSITE PREFINISHED SHEET METAL FLASHING WITH HEMMED DRIP EDGE - TAPED WITH SELF-ADHERED MEMBRANE AND LAPPED BY MOISTURE BARRIER DOOR & FRAME PER SCHEDULE BID ALTERNATE NO. 1. PROVIDE INSULATED HM DOOR FRAME AND

5 EXTERIOR DOOR WITH GLASS LITE - HEAD

GLAZED DOOR IN LIEU OF STOREFRONT SYSTEM.

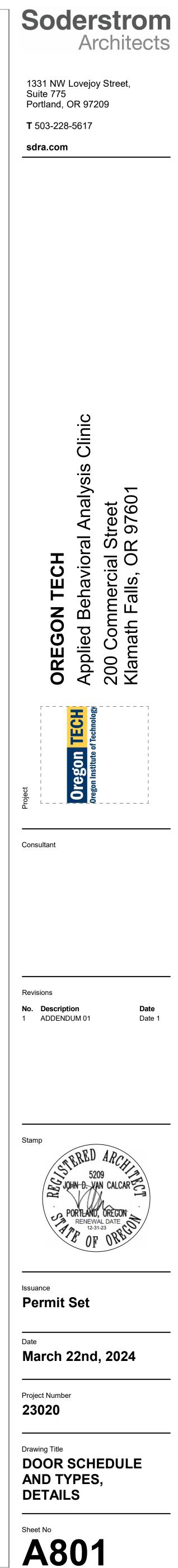
SEE DETAIL 8 AND 9 SIMILAR.

BOTH LEVERS ALWAYS UNLOCKED.

INSIDE THUMB TURN LATCH WITH OCCUPANCY INDICATOR.

SHEET NOTES

1. "SAFETY GLAZING" SHALL BE PROVIDED IN ALL "HAZARDOUS LOCATIONS" DEFINED IN OSSC. 2. 'T' ON FRAME TYPES INDICATES TEMPERED SAFETY GLAZING. 3. VERIFY IN FIELD ALL ROUGH OPENING DIMENSIONS

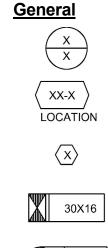


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	tandard symbol list and not all items listed may be used.		
Abbreviatio	ons	<u>Control Syml</u>	ools
AFF	ABOVE FINISHED FLOOR	-	
A/C		(T) E	LINE VOLTAGE THERMOSTAT
BDD CD	BACKDRAFT DAMPER CEILING DIFFUSER		
CONT.	CONTINUATION	(T) <u>AC-1</u>	SPACE TEMPERATURE SENSOR/THERMOSTAT
DB	DECIBEL	<u> </u>	
(X)	DEMOLISH	Dampers	
DIA	DIAMETER	Dampers	
DG	DOOR GRILLE		VOLUME DAMPER
DB	DRY BULB		
ELECT EXH	ELECTRICAL EXHAUST	Diffusers and	l Grilles
EF	EXHAUST FAN		
(E)	EXISTING	12×12 CD-1 100	DIFFUSER OR GRILLE IDENTIFICATION
F	FAHRENHEIT	100	
FT	FEET		
FLA	FULL LOAD AMPS	\boxtimes \otimes	EXHAUST AIR
HP	HORSEPOWER		
IN ID	INCHES INSIDE DIAMETER		
KW	KILOWATT	$\square \oslash$	RETURN AIR
MAX	MAXIMUM		
MIN	MINIMUM	_\/>	RETURN/EXHAUST AIR FLOW
(N)	NEW	V	
N/A	NOT APPLICABLE		
NIC	NOT IN CONTRACT	$\boxtimes \otimes$	SUPPLY AIR
NTS	NOT TO SCALE		
NO.			
OC OBD	ON CENTER OPPOSED BLADE DAMPER	\rightarrow	SUPPLY AIR FLOW
OA	OUTSIDE AIR		
OD	OUTSIDE DIAMETER	Ductwork Fit	<u>tings</u>
PH	PHASE		
LBS.	POUNDS	·	ACOUSTICALLY LINED DUCT (SIZES SHOWN ARE NET INSIDE)
PD	PRESSURE DROP		
QTY	QUANTITY		
(R)	RELOCATE/RELOCATED LOCATION		CONCENTRIC SQUARE TO ROUND
RET RA	RETURN RETURN AIR		
RPM	REVOLUTIONS PER MINUTE		CONCENTRIC TRANSITION, RECTANGULAR OR ROUND
R	RISE		CONCENTRIC TRANSITION, RECTANGULAR OR ROUND
SF	SQUARE FEET		
SP	STATIC PRESSURE		ECCENTRIC TRANSITION, RECTANGULAR OR ROUND
SA	SUPPLY AIR		
T, TEMP	TEMPERATURE		
TP	TOTAL PRESSURE		FLEX DUCT
UD	UNDERCUT DOOR		
VEL	VELOCITY	⊢	
V VD	VOLT VOLUME DAMPER (HAND OPERATOR)		FLEXIBLE CONNECTION
W	WATT	I	
W/	WITH	、 〕 (初	
W/O	WITHOUT		NON-SYMMETRICAL WYE
			RECTANGULAR DUCT DROP
			RECTANGULAR DUCT RISER
			RECTANGULAR MAIN WITH RECTANGULAR BRANCH
		~ +	
		,	
		┝┯┙┝┯┥	RECTANGULAR MAIN WITH ROUND BRANCH
		┝┯┙┝┯╛	RECTANGULAR MAIN WITH ROUND BRANCH
			RECTANGULAR MAIN WITH ROUND BRANCH
			RECTANGULAR OFFSET LESS THAN 15%%d
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			RECTANGULAR OFFSET LESS THAN 15%%d
			RECTANGULAR OFFSET LESS THAN 15%%d RECTANGULAR OFFSET MORE THAN 15%%d ROUND DUCT DROP
			RECTANGULAR OFFSET LESS THAN 15%%d
			RECTANGULAR OFFSET LESS THAN 15%%d RECTANGULAR OFFSET MORE THAN 15%%d ROUND DUCT DROP
			RECTANGULAR OFFSET LESS THAN 15%%d RECTANGULAR OFFSET MORE THAN 15%%d ROUND DUCT DROP ROUND DUCT RISER
			RECTANGULAR OFFSET LESS THAN 15%%d RECTANGULAR OFFSET MORE THAN 15%%d ROUND DUCT DROP
			RECTANGULAR OFFSET LESS THAN 15%%d RECTANGULAR OFFSET MORE THAN 15%%d ROUND DUCT DROP ROUND DUCT RISER
			RECTANGULAR OFFSET LESS THAN 15%%d RECTANGULAR OFFSET MORE THAN 15%%d ROUND DUCT DROP ROUND DUCT RISER ROUND DUCT WITH ROUND BRANCH
			RECTANGULAR OFFSET LESS THAN 15%%d RECTANGULAR OFFSET MORE THAN 15%%d ROUND DUCT DROP ROUND DUCT RISER ROUND DUCT WITH ROUND BRANCH
			RECTANGULAR OFFSET LESS THAN 15%%d RECTANGULAR OFFSET MORE THAN 15%%d ROUND DUCT DROP ROUND DUCT RISER ROUND DUCT WITH ROUND BRANCH ROUND WYE
			RECTANGULAR OFFSET LESS THAN 15%%d RECTANGULAR OFFSET MORE THAN 15%%d ROUND DUCT DROP ROUND DUCT RISER ROUND DUCT WITH ROUND BRANCH

RADIUSED ELBOW

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DETAIL NUMBER AND SHEET LOCATION

EQUIPMENT IDENTIFICATION

KEYED NOTE

30X16 RECTANGULAR DUCT SIZING

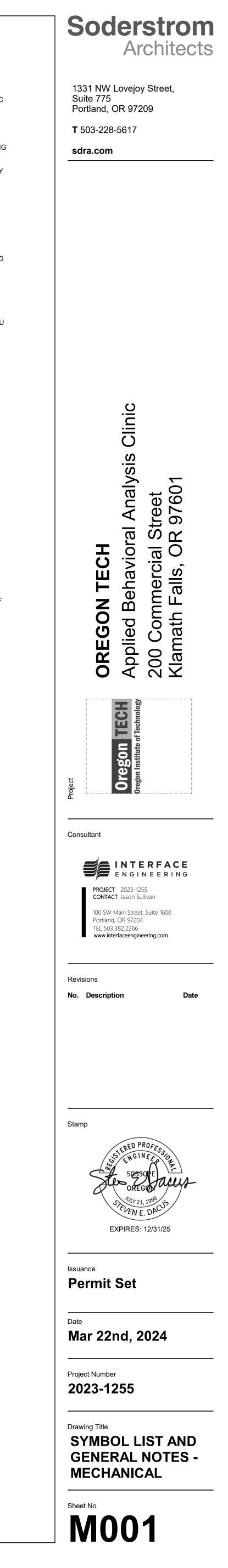
30"Ø ROUND DUCT SIZING

GENERAL MECHANICAL NOTES

- A. PROVIDE MISCELLANEOUS METALS AND MATERIALS FOR A COMPLETE INSTALLATION OF THE HVAC SYSTEM (IE. SUPPORT, BRACING, ETC.)
- B. PRIOR TO SUBMISSION OF BID, REVIEW A COMPLETE SET OF CONSTRUCTION DOCUMENTS (INCLUDING ALL OTHER TRADES). INCLUDE ADDITIONAL PIPE OR DUCT OFF-SETS THAT MAY BE REQUIRED TO CLEAR STRUCTURE, FINISHES OR WORK OF OTHER TRADES. FIELD VERIFY EXACT LOCATION AND SIZES OF EXISTING UTILITIES, THE PROPOSED POINT OF CONNECTIONS TO EXISTING SYSTEMS, AND NEW ROUTINGS. EXTRA PAYMENT WILL NOT BE ALLOWED FOR WORK RESULTING FROM LACK OF APPRAISAL OF ENTIRE SCOPE OF WORK PRIOR TO BID. SYSTEM LAYOUTS AS INDICATED ON DRAWINGS ARE GENERALLY DIAGRAMMATIC BUT SHALL BE FOLLOWED AS CLOSELY AS ACTUAL CONSTRUCTION WILL PERMIT.
- C. DUCTWORK DIMENSIONS SHOWN ON DRAWINGS ARE CLEAR INTERNAL DIMENSIONS. WHEN ACOUSTICAL DUCT LINING IS REQUIRED INCREASE DUCT SIZE AS NECESSARY TO MAINTAIN THE CLEAR INTERNAL DIMENSIONS.
- D. DUCT RUNOUTS TO SUPPLY, EXHAUST, AND RETURN GRD'S TO MATCH SIZE OF CONNECTED GRD, UNLESS NOTED OTHERWISE.
- E. PROVIDE DUCT ACCESS DOORS FOR EQUIPMENT AND DEVICES REQUIRING ACCESS OR RESETTING (IE. FIRE AND SMOKE DAMPERS, SMOKE DAMPERS, SENSORS, ETC.) INDICATE SIZE AND LOCATION ON COORDINATED SHOP DRAWINGS.
- F. PROVIDE MANUAL VOLUME DAMPERS AT EACH GRILLE, REGISTER, AND DIFFUSER. DO NOT USE VOLUME DAMPERS INTEGRAL WITH GRILLES, DIFFUSERS AND REGISTERS FOR AIR BALANCING.
- G. PROVIDE DUCTWORK AND TRANSITIONS EQUAL TO DUCT FREE AREA SHOWN ON DRAWINGS. TO PREVENT A SPATIAL CONFLICT, AT CONTRACTOR'S OPTION AND IF SPATIAL CONSTRAINTS ALLOW, ROUND SPIRAL DUCTWORK, OF EQUAL CROSS-SECTIONAL AREA OR LARGER, MAY BE USED IN LIEU
- OF RECTANGULAR DUCTWORK WHERE SHOWN ON PLANS. H. USE FLEXIBLE DUCTS ONLY FOR THE LAST 5 FEET MAXIMUM AT AIR OUTLETS. DO NOT USE
- FLEXIBLE DUCTWORK IN LIEU OF ELBOWS OR FITTINGS. I. COORDINATE EXACT LOCATIONS AND ELEVATIONS OF ALL SIDEWALL GRILLES WITH ARCHITECT.
- J. COORDINATE WITH DIVISION 26 FOR LOCATION OF POWER AND LOCAL DISCONNECTS FOR MECHANICAL EQUIPMENT DEVICES. PROVIDE STARTERS FOR EQUIPMENT WITHOUT VFD'S, ECM MOTORS, OR EQUIPMENT WITHOUT INTEGRAL STARTERS.
- K. INSTALL EQUIPMENT WITH SUFFICIENT ACCESS TO PANELS, CONTROLS, FILTERS, MOTORS, ETC. COORDINATE ACCESS TO ALL DAMPERS, VALVES, AND OTHER SERVICEABLE EQUIPMENT. REVIEW CEILING HEIGHTS AND COORDINATE ACCESS PANEL LOCATIONS.
- L. PROVIDE CEILING ACCESS PANELS FOR ACCESS TO CONCEALED EQUIPMENT AND OTHER DEVICES. LOCATION OF ACCESS PANELS IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH AS-BUILT CONDITIONS. ALL CEILING PANELS MAY NOT BE INDICATED ON THE MECHANICAL DRAWINGS. SUBMIT PROPOSED ACCESS PANEL LAYOUT TO ARCHITECT DURING PRE-CONSTRUCTION COORDINATION PROCESS FOR REVIEW.
- M. VERIFY DIFFUSERS, GRILLES, AND REGISTER, FACTORY FINISH COLOR, MOUNTING FRAME TYPES WITH CONSTRUCTION TYPE AND CONFIGURATION.
- N. PAINT FLAT BLACK ALL VISIBLE INTERIOR PORTIONS OF DUCTWORK. O. PROTECT AND ISOLATE DUCTS STORED ON CONSTRUCTION SITE FROM DUST CONTAMINATION.
- P. PROTECT AND ISOLATE EQUIPMENT STORED ON CONSTRUCTION SITE FROM WEATHER AND DUST CONTAMINATION.
- Q. COORDINATE LOCATION OF SENSORS AND THERMOSTATS WITH ARCHITECT AND OTHER WALL MOUNTED SWITCHES (IE LIGHTS). COMPLY WITH ADA REQUIREMENTS.
- R. "DEMOLISH" OR "REMOVE": REMOVE AND RETURN TO OWNER FOR ACCEPTANCE, AND DISPOSE OF ANY ITEMS NOT ACCEPTED BY THE OWNER.

SHEET INDEX

- M001 SYMBOL LIST AND GENERAL NOTES MECHANICAL M002 SCHEDULES - MECHANICAL
- M201 FLOOR PLAN MECHANICAL
- M500 DETAILS MECHANICAL



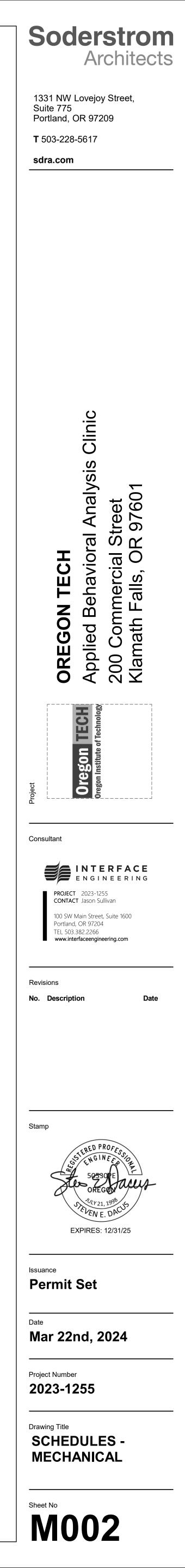
							FAN	SCH	EDU	LE		FAN SCHEDULE														
	BASIS OF DESIGN MAX																									
		AREA					AIR FLOW	ESP (IN	MAX	MAX			WAT		WT											
SYMBOL	LOCATION	SERVED	MFR	MODEL	TYPE	DRIVE	(CFM)	H20)	RPM	SONES	VOLTS	PH	TS	CONTROLS REF	(LBS)	COMMENTS										
EF-1	RESTROOM 120	RESTROOM 120	GREENHECK	SP-A125	CEILING	DIRECT	100	0.25	1054	0.6	120	1	18	LIGHT SWITCH	18	SPEED CONTROLLER, BACKDRAFT DAMPER, WALL CAP										
EF-2	RESTROOM 119	RESTROOM 119	GREENHECK	SP-A125	CEILING	DIRECT	100	0.25	1054	0.6	120	1	18	LIGHT SWITCH	18	SPEED CONTROLLER, BACKDRAFT DAMPER, WALL CAP										
EF-3	JANITOR 123	JANITOR 123	GREENHECK	SP-A125	CEILING	DIRECT	100	0.25	1054	0.6	120	1	18	TIME CLOCK	18	SPEED CONTROLLER, BACKDRAFT DAMPER, WALL CAP										
EF-4	LAUNDRY 121	LAUNDRY 121	GREENHECK	CSP-A125	INLINE CABINET	DIRECT	100	0.25	969	0.3	120	1	52	TIME CLOCK	17	SPEED CONTROLLER, BACKDRAFT DAMPER, WALL CAP										
EF-5	RESTROOM 120	RESTROOM 120	GREENHECK	SP-A125	CEILING	DIRECT	100	0.25	1054	0.6	120	1	18	LIGHT SWITCH	18	SPEED CONTROLLER, BACKDRAFT DAMPER, WALL CAP										
EF-6	STORAGE 130	STORAGE 130	GREENHECK	CSP-A390-VG	INLINE CABINET	DIRECT	350	0.25	1279	1.4	120	1	74	LINE VOLTAGE T-STAT	24	EC MOTOR, BACKDRAFT DAMPER										

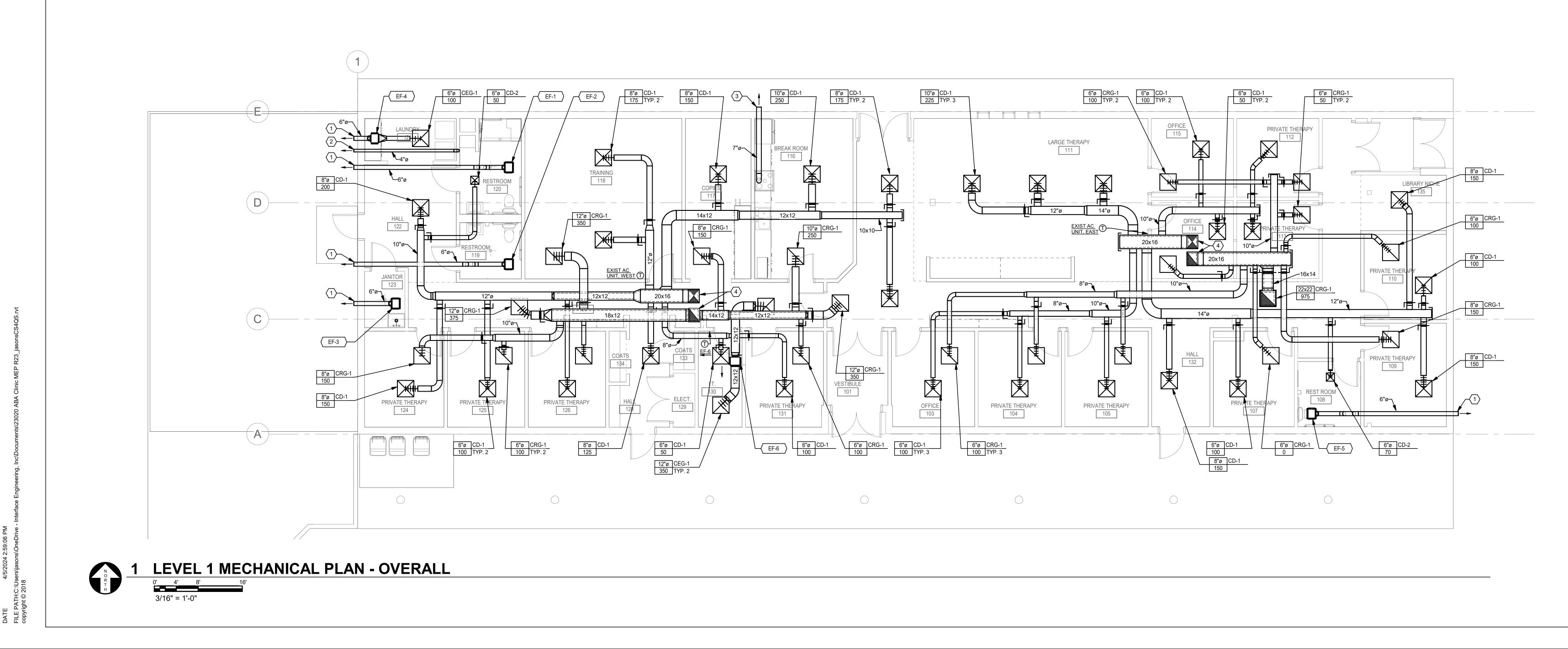
	DIFFUSER	REGI	STER			SCHI						
DIFFUSER, REGISTER AND GRILLE SCHEDULE												
						BASIS OF	DESIGN					
SYMBOL	TYPE	FACE	FRAME	DAMPER	FINISH	MFR.	MODEL	COMMENTS				
CD-1	CEILING SUPPLY DIFFUSER	PERFORATED	LAY-IN	NONE	WHITE	TITUS	PCS					
CD-2	CEILING SUPPLY DIFFUSER	PERFORATED	SURFACE	NONE	WHITE	TITUS	PCS					
CEG-1	CEILING EXHAUST GRILLE	PERFORATED	LAY-IN	NONE	WHITE	TITUS	PAR					
CRG-1	CEILING RETURN GRILLE	PERFORATED	LAY-IN	NONE	WHITE	TITUS	PAR					

		Az		Rp	Ra		Pz	Vbz	EZ	Voz	
EQUIPMENT TAG	ROOM	NET OCCUPIABLE FLOOR AREA (SF)	DEFAULT OCCUPANT DENSITY (#/1000SF)	PEOPLE OUTDOOR AIR RATE (CFM / PERSON)	AREA OUTDOOR AIR FLOW RATE (CFM/SQ FT)	DEFAULT ZONE POPULATION	ACTUAL ZONE POPULATION	BREATHING ZONE OUTDOOR AIRFLOW (CFM)	ZONE AIR DISTRIBUTION EFFECTIVENESS	ZONE OUTDOOR AIRFLOW (CFM)	DESIGN OSA (CFM)
EXIST. AC UNIT, EAST	OFFICE 103, 114, 115, PRIVATE THERAPY 104, 105, 107, 110, 112, 113	1090	5	5.00	0.06	6	11	120	0.8	151	155
EXIST. AC UNIT, EAST	LARGE THERAPY 111	680	25	5.00	0.06	17	17	126	0.8	157	160
EXIST. AC UNIT, EAST	HALL	375	0	0.00	0.06	0	6	23	0.8	28	30

OUTSIDE AIR VENTILATION SCHEDULE - EXISTING AC UNIT, WEST

		Az		Rp	Ra		Pz	Vbz	EZ	Voz	
		NET	DEFAULT	PEOPLE	AREA			BREATHING	ZONE	ZONE	
		OCCUPIABLE	OCCUPANT	OUTDOOR AIR	OUTDOOR AIR	DEFAULT	ACTUAL	ZONE OUTDOOR	AIR	OUTDOOR	DESIGN
EQUIPMENT		FLOOR AREA	DENSITY	RATE	FLOW RATE	ZONE	ZONE	AIRFLOW	DISTRIBUTION	AIRFLOW	OSA
TAG	ROOM	(SF)	(#/1000SF)	(CFM / PERSON)	(CFM/SQ FT)	POPULATION	POPULATION	(CFM)	EFFECTIVENESS	(CFM)	(CFM)
EXIST. AC UNIT, WEST	TRAINING 118	372	50	5.00	0.06	19	19	117	0.8	147	150
EXIST. AC UNIT, WEST	COPIES 117	155	4	5.00	0.06	1	1	14	0.8	18	20
EXIST. AC UNIT, WEST	BREAK ROOM	230	25	5.00	0.06	6	6	44	0.8	55	55
EXIST. AC UNIT, WEST	PRIVATE THERAPY 124, 125, 126, 131	440	5	5.00	0.06	3	4	46	0.8	58	60
EXIST. AC UNIT, WEST	HALL 122, 128, 132	589	0	0.00	0.06	0	4	35	0.8	44	45
NOTES:			I		1						TOTAL:
1	BREATHING ZONE OUTDOOR AIRFLOW:	Vbz = Rp*Pz + Ra*Az.									330
2	ZONE OUTDOOR AIRFLOW: Voz= Vbz/Ez.									-	





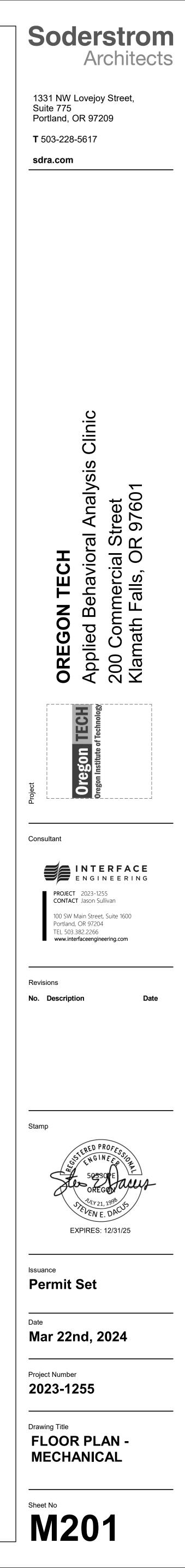


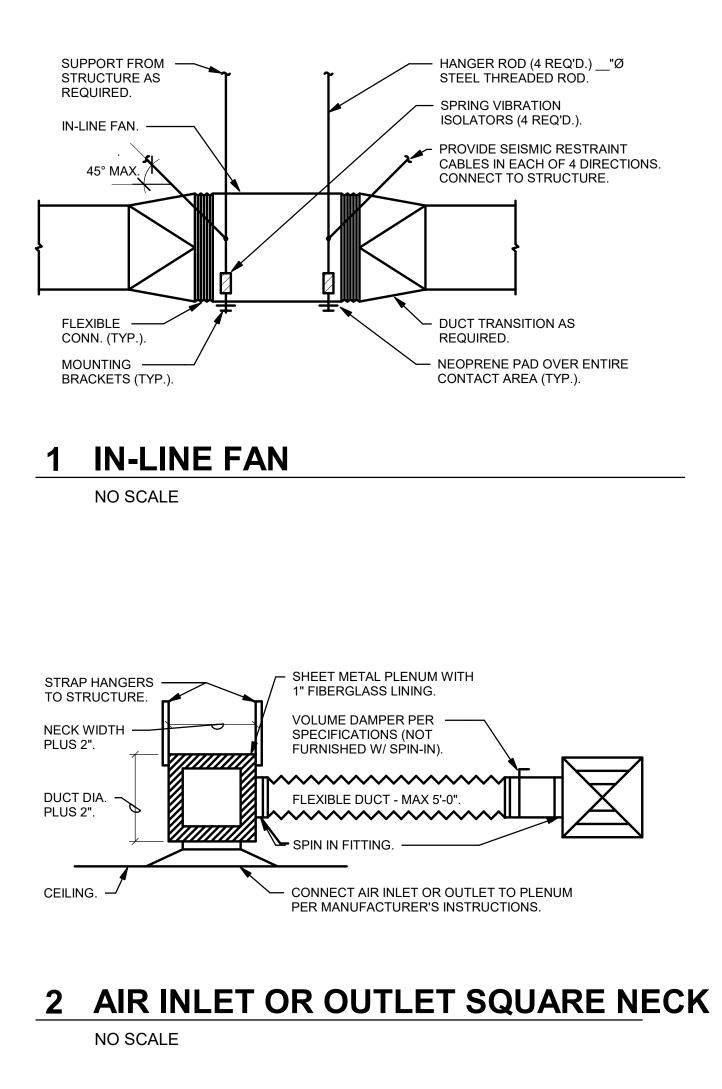
GENERAL SHEET NOTES

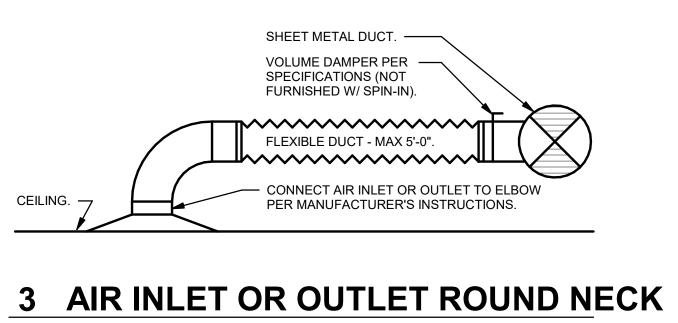
- A. SEE ARCHITECTURAL DRAWINGS FOR HVAC DEMOLITION NOTES.
- B. TWO EXISTING 5-TON ROOFTOP AC UNITS WITH GAS HEAT ARE TO REMAIN.
- C. EXISTING DOMESTIC HOT WATER HEATER GAS FLUE IN EXISTING JANITOR CLOSET IS TO REMAIN.
- D. PROVIDE NEW PROGRAMMABLE THERMOSTATS TO CONTROL TWO EXISTING ROOFTOP AC UNITS WITH GAS HEAT.
- E. PROVIDE AIR FLOW BALANCING INFORMATION FOR TWO EXISTING ROOFTOP AC UNITS PRIOR TO DEMOLITION PER 23 05 93. F. BALANCE EXISTING AC UNIT SUPPLY FAN TO AIR FLOW EQUAL TO SUM OF SUPPLY GRILLES. BALANCE EXISTING AC UNIT OUTSIDE AIR DAMPER TO AIRFLOW SHOWN IN
- OUTSIDE AIR VENTILATION SCHEDULE. G. COORDINATE ELEVATIONS OF ALL EXTERIOR SIDEWALL DUCT TERMINATIONS WITH ARCHITECT.

○ SHEET KEYNOTES

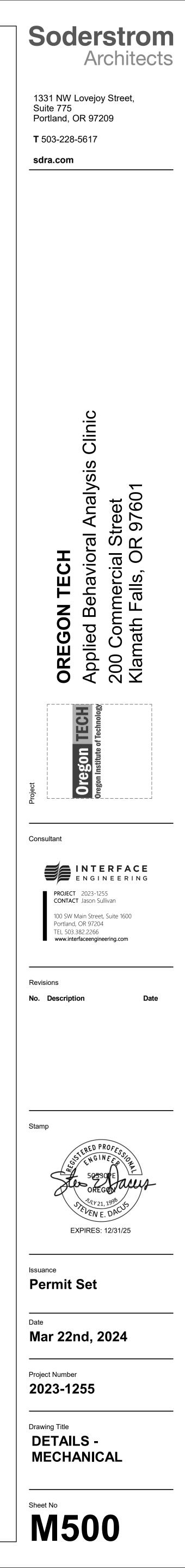
- TERMINATE EXHAUST DUCT WITH FACTORY WALL CAP PROVIDED BY FAN MANUFACTURER.
- 2. TERMINATE DRYER DUCT WITH HOODED WALL CAP WITH BACKDRAFT FLAPPER.
- 3. TERMINATE RESIDENTIAL EXHAUST HOOD DUCT WITH HOODED WALL CAP WITH BIRD SCREEN.
- 4. ROUTE LINED 20x16 SUPPLY AND RETURN DUCTS UP TO EXISTING AC UNIT ON ROOF.







NO SCALE



ELECTRICAL SYMBOL LIST

NOTE: This is	a standard symbol list and not all items listed may be used.				
Abbreviat		Connections	<u>s / Equipment</u>		CONDUIT/WIRING CONTINUATION
AFC AFF	ABOVE FINISHED CEILING ABOVE FINISHED FLOOR	VFD	COMBINATION ADJUSTABLE FREQUENCY DRIVE WITH SAFETY DISCONNECT SWITCH. FURNISHED BY DIVISION 23 AND INSTALLED BY DIVISION 26.	(
ANSI AWG	AMERICAN NATIONAL STANDARDS INSTITUTE AMERICAN WIRE GAUGE	_		——–=	CONDUIT/WIRING STUBBED OUT WITH END (PLASTIC BUSHING
A AHJ	AMPERES, AMBER AUTHORITY HAVING JURISDICTION	\boxtimes	COMBINATION MOTOR STARTER/FUSED DISCONNECT SWITCH		
AIC BAS	AVAILABLE INTERRUPTING CAPACITY BUILDING AUTOMATION SYSTEM	F	HEAVY DUTY FUSED DISCONNECT SWITCH	~~~~~~	FLEXIBLE CONDUIT
CA CAT	CABLE CATEGORY	_		Switches and	<u>d Receptacies</u> DUPLEX RECEPTACLE (MULTIPLE LETTERS I
CLG C	CEILING CONDUIT, CLOSE, CONTROL	\mathcal{O}	MOTOR CONNECTION		OPTIONS) A = ABOVE COUNTER
COORD CU	COORDINATE COPPER				B = CLOCK HANGER C = FLUSH CEILING MOUNTED
dB	DECIBEL DEMOLISH		NON-FUSED DISCONNECT SWITCH		E = EMERGENCY F = ARC FAULT PROTECTED BY BREAKER II G = GROUND FAULT CIRCUIT INTERRUPTEF
(X) DTL	DETAIL	Т	TRANSFORMER		H = HOSPITAL GRADE K = CHILD RESISTANT COVER
DIA DIM	DIAMETER DIMENSION			Φ	L = ISOLATED GROUND P = PENDANT MOUNTED WITH CORD GRIPS
DIV DN	DIVISION DOWN	FSD	FIRE SMOKE DAMPER		LENGTH R1 = HALF SWITCHED BY OCCUPANCY SENS
DWG EA	DRAWING EACH	-			R2 = FULLY SWITCHED BY OCCUPANCY SEN S = SPLIT WIRED T = TAMPER RESISTANT SHUTTERED RECE
EMT EL	ELECTRICAL METALLIC TUBING ELEVATION	SD	SMOKE DAMPER		U = USB PORT(S) W = WEATHERPROOF CONTINUOUS USE CO
E	EMERGENCY EXHAUST FAN	J	CEILING MOUNTED JUNCTION BOX		WITH WEATHER-RESISTANT RECEPTACLE
(E) FF	EXISTING FINISH FLOOR	_		\square	DUPLEX RECEPTACLE, FLUSH FLOOR
FA	FIRE ALARM	J	FLOOR MOUNTED JUNCTION BOX		
FACP FMC	FIRE ALARM CONTROL PANEL FLEXIBLE METAL CONDUIT	Ο		()	DOUBLE DUPLEX RECEPTACLE, FLUSH FLOC
FT FBO	FOOT, FEET FURNISHED BY OTHERS	Q	WALL-MOUNTED JUNCTION BOX	+	DOUBLE DUPLEX RECEPTACLE. SEE LETTER
G, GND GFCI	GROUND GROUND FAULT CIRCUIT INTERRUPTER	Fire Alarm			RECEPTACLE FOR OPTIONS
GFI GFP	GROUND FAULT INTERRUPTER GROUND FAULT PROTECTION		FIRE ALARM CONTROL PANEL	۲	EQUIPMENT ELECTRICAL CONNECTION
HH HT	HANDHOLE HEIGHT	<u>General</u>			SPECIAL PURPOSE RECEPTACLE. LETTER CO
ID IN	IDENTIFICATION INCH, INCHES	X	DETAIL NUMBER AND SHEET LOCATION		RECEPTACLE CONFIGURATION LX-XXR = NEMA CONFIGURATION TWIST-LOO X-XXR = NEMA CONFIGURATION STRAIGHT I
IEEE	INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS	X		\Diamond	X-XXR = NEMA CONFIGURATION STRAIGHT P = PENDANT MOUNT WITH CORD GRIPS. VE X = COORDINATE RECEPTACLE CONFIGURA
IMC IG	INTERMEDIATE METAL CONDUIT ISOLATED GROUND		EQUIPMENT IDENTIFICATION		BEING SUPPLIED CEILING MOUNTED OCCUPANCY SENSOR
KV KVA	KILOVOLT KILOVOLT AMPERES			_	P = PASSIVE INFRARED D = DUAL TECHNOLOGY
KW LED	KILOWATT LIGHT EMITTING DIODE	$\langle 1 \rangle$	KEYED NOTE	os	U = ULTRASONIC, 360 DEG RANGE H = ULTRASONIC, HALLWAY PATTERN
LFMC LV	LIQUIDTIGHT FLEXIBLE METAL CONDUIT LOW VOLTAGE	—x—x—	DEMOLISH		v (LOWERCASE) = VACANCY CONTROL DES WALL MOUNTED OCCUPANCY SENSOR
MOCP mA	MAXIMUM OVERCURRENT PROTECTION MILLIAMPERES			os–	P = PASSIVE INFRARED D = DUAL TECHNOLOGY
MIN MCA	MINIMUM MINIMUM CIRCUIT AMPS		EXISTING WORK		v (LOWERCASE) = VACANCY CONTROL DES WALL MOUNTED OCCUPANCY SENSOR/SWIT
MISC	MISCELLANEOUS			ss	S = PASSIVE INFRARED WITH INTEGRAL "OF T = DUAL RELAY PASSIVE INFRARED WITH T SWITCHES
MCC MT, MTD	MOTOR CONTROL CENTER MOUNT, MOUNTED		NEW WORK		D = PASSIVE INFRARED WITH INTEGRAL DIA v (LOWERCASE) = VACANCY CONTROL DES
NEC NESC	NATIONAL ELECTRIC CODE NATIONAL ELECTRIC SAFETY CODE	<u>Lighting</u>			MULTIPLE CHANNEL SURFACE METAL RECEP
NEMA N	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION NEUTRAL	8	EXIT SIGN CEILING MOUNTED, ARROW(S) INDICATES DIRECTION IF SHOWN	***********	WITH LOW VOLTAGE DIVIDERS, LENGTH AND INDICATED
(N) N/A	NEW NOT APPLICABLE	_	EXIT SIGN WALL MOUNTED, ARROW(S) INDICATES DIRECTION IF	ଡ଼	PHOTO ELECTRIC SWITCH D = CONTINUOUS DIMMING PHOTOCELL
N.I.C. NTS	NOT IN CONTRACT NOT TO SCALE	ً	SHOWN		S = SWITCHED PHOTOCELL SINGLE POLE SWITCH
OC OFCI	ON CENTER OWNER FURNISHED, CONTRACTOR INSTALLED		RECESSED 1' X 4' LUMINAIRE		2 = DOUBLE POLE SWITCH 3 = THREE-WAY SWITCH
PNL PH	PANEL PHASE		RECESSED 1' X 4' LUMINAIRE CONNECTED TO EMERGENCY/LIFE		4 = FOUR-WAY SWITCH a THRU z (LOWERCASE) = LUMINAIRE CONT D = DIMMER
PVC PWR	POLY-VINYL-CHLORIDE POWER		SAFETY CIRCUIT OR WITH INTEGRAL EMERGENCY BATTERY CONNECTED TO UNSWITCHED CIRCUIT	\$	F = FAN SPEED CONTROL K = KEY OPERATED SWITCH
QTY	QUANTITY		RECESSED 2' X 2' LUMINAIRE	Ŧ	L = LIGHTED HANDLE M = MANUAL MOTOR STARTER WITH THERM P = SWITCH WITH PILOT LIGHT
REF (R)	REFERENCE RELOCATE				S = SENTRY SWITCH T = INTERVAL TIMER
RFI REQD	REQUEST FOR INFORMATION REQUIRED		RECESSED 2' X 2' LUMINAIRE CONNECTED TO EMERGENCY/LIFE SAFETY CIRCUIT OR WITH INTEGRAL EMERGENCY BATTERY CONNECTED TO UNSWITCHED CIRCUIT		W = WEATHERPROOF SWITCH V = LOW VOLTAGE SWITCH
RMC RM	RIGID METAL CONDUIT ROOM			<u>Telecommur</u>	
SHT SIM	SHEET SIMILAR		RECESSED 2' X 4' LUMINAIRE	\bigtriangledown	RACEWAY ONLY DATA OUTLET. PROVIDE DO AND SINGLE GANG ADAPTER PLATE WITH 1" TO ACCESSIBLE CEILING SPACE. SEE LETTEI
STD SPD	STANDARD SURGE PROTECTION DEVICE		RECESSED 2' X 4' LUMINAIRE CONNECTED TO EMERGENCY/LIFE SAFETY CIRCUIT OR WITH INTEGRAL EMERGENCY BATTERY		DATA/TELEPHONE OUTLET FOR OPTIONS.
SWBD TBD	SWITCHBOARD TO BE DETERMINED		CONNECTED TO UNSWITCHED CIRCUIT		
XFMR TVSS	TRANSFORMER TRANSIENT VOLTAGE SURGE SUPPRESSOR	Ø	RECESSED LUMINAIRE		
TYP UG	TYPICAL UNDERGROUND	Ē	RECESSED LUMINAIRE CONNECTED TO EMERGENCY/LIFE SAFETY		
UL UPS	UNDERWRITERS LABORATORIES UNINTERRUPTIBLE POWER SUPPLY		CIRCUIT		
UON VFD	UNINTERROPTIBLE FOWER SUPPLY UNLESS OTHERWISE NOTED VARIABLE FREQUENCY DRIVE	오	WALL MOUNTED LUMINAIRE		
V	VOLTS, VOLTAGE		WALL MOUNTED LUMINAIRE CONNECTED TO EMERGENCY/LIFE		
WP WG	WEATHERPROOF WIRE GUARD	₽	SAFETY CIRCUIT OR WITH INTEGRAL EMERGENCY BATTERY CONNECTED TO UNSWITCHED CIRCUIT		
W/ W/O	WITH WITHOUT	<u>Miscellaneou</u>			
			BRANCH CIRCUIT WIRING. ARROW INDICATES HOME RUN TO PANEL WITH CIRCUITS AS NOTED. WIRE SIZE IS #12 AWG MINIMUM		
		#10 	UNLESS NOTED OTHERWISE. SHORT TICK MARKS INDICATE PHASE CONDUCTORS. LONG TICK MARKS INDICATE NEUTRAL CONDUCTORS. A SINGLE CURVED TICK MARK INDICATES		
		B-27,29,31.	INSULATED GREEN GROUND CONDUCTOR. SECOND CURVED TICK MARK INDICATES "ISOLATED GROUND" (GREEN INSULATION WITH		
			YELLOW STRIPE) CONDUCTOR.		
			BRANCH PANEL		
			CIRCUIT BREAKER		
			DRY TYPE TRANSFORMER		
			FLUSH WALL MOUNTED BRANCH PANEL		
		GB			
			GROUND BAR		
			MAIN DISTRIBUTION PANEL / SUB DISTRIBUTION PANEL		
		Racowova			
		<u>Raceways</u>			
			- CONDUIT CONCEALED IN WALL OR CEILING SPACE		
			- CONDUIT ROUTED BELOW FLOOR / GRADE		
		•	CONDUIT ELLED DOWN		

CONDUIT ELLED UP

IG CONTINUATION

IG STUBBED OUT WITH END CAP OR INSULATED

TACLE (MULTIPLE LETTERS INDICATE MULTIPLE

UNTER NGER LING MOUNTED PROTECTED BY BREAKER IN PANEL

AULT CIRCUIT INTERRUPTER GRADE SISTANT COVER

GROUND OUNTED WITH CORD GRIPS. VERIFY PENDANT TCHED BY OCCUPANCY SENSOR RELAY

ITCHED BY OCCUPANCY SENSOR RELAY

SISTANT SHUTTERED RECEPTACLE PROOF CONTINUOUS USE COVER, GFCI PROTECTED,

X RECEPTACLE, FLUSH FLOOR

X RECEPTACLE. SEE LETTER CODE LIST AT DUPLEX OR OPTIONS

DSE RECEPTACLE. LETTER CODE DENOTES ONFIGURATION CONFIGURATION TWIST-LOCK RECEPTACLE CONFIGURATION STRAIGHT BLADE RECEPTACLE

10UNT WITH CORD GRIPS. VERIFY PENDANT LENGTH TE RECEPTACLE CONFIGURATION WITH EQUIPMENT TED OCCUPANCY SENSOR

IFRARED HNOLOGY C, 360 DEG RANGE IC, HALLWAY PATTERN E) = VACANCY CONTROL DESIGNATION

D OCCUPANCY SENSOR IFRARED HNOLOGY) = VACANCY CONTROL DESIGNATION D OCCUPANCY SENSOR/SWITCH

FRARED WITH INTEGRAL "OFF" SWITCH Y PASSIVE INFRARED WITH TWO INTEGRAL "OFF"

FRARED WITH INTEGRAL DIMMER TO OFF. E) = VACANCY CONTROL DESIGNATION NEL SURFACE METAL RECEPTACLE RACEWAY TAGE DIVIDERS, LENGTH AND RECEPTACLES AS

IC SWITCH US DIMMING PHOTOCELL PHOTOCELL

SWITCH ERCASE) = LUMINAIRE CONTROL DESIGNATION CONTROL

ATED SWITCH ANDLE OTOR STARTER WITH THERMAL OVERLOAD

TH PILOT LIGHT VITCH TIMER

Y DATA OUTLET. PROVIDE DOUBLE GANG BACK BOX NG ADAPTER PLATE WITH 1" C. AND PULLSTRING E CEILING SPACE. SEE LETTER CODE LIST AT NE OUTLET FOR OPTIONS.

GENERAL ELECTRICAL NOTES

- A. ALL ELECTRICAL MATERIAL AND INSTALLATIONS SHOWN AND/OR SPECIFIED TO BE INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS AND IN ACCORDANCE WITH THE LATEST EDITION OF THE NEC 2023.
- B. REFER TO ARCHITECTURAL DRAWINGS TO COORDINATE LOCATION AND MOUNTING HEIGHT OF ALL ELECTRICAL DEVICES.
- C. REFER TO MECHANICAL AND PLUMBING DRAWINGS FOR EXACT LOCATION OF ALL MECHANICAL AND PLUMBING EQUIPMENT.
- D. MAXIMUM VOLTAGE DROP OF BRANCH CIRCUITS TO BE 3%. ELECTRICAL CONTRACTOR TO SIZE WIRING TO SUIT.
- E. NO WIRE SMALLER THAN #12 AWG SHALL BE USED FOR BRANCH CIRCUIT WIRING.
- F. IN FINISHED INTERIOR AREAS RUN ALL CONDUITS CONCEALED UNLESS OTHERWISE NOTED. PAINT ALL EXPOSED CONDUITS AND ELECTRICAL EQUIPMENT. REFER TO ARCHITECTURAL PAINTING SPECIFICATIONS FOR REQUIREMENTS.
- G. ALL EXPOSED CONDUIT TO BE RUN PARALLEL TO BUILDING LINES. H. PROVIDE DEDICATED NEUTRALS FOR ALL BRANCH CIRCUITS UNLESS OTHERWISE
- NOTED. I. ALL IN-SLAB OR BURIED CONDUIT TO BE COMPLETE WITH EQUIPMENT GROUNDING
- CONDUCTOR. J. ALL EMPTY CONDUITS TO BE COMPLETE WITH PULL WIRE.
- K. MC CABLE SHALL NOT BE USED WITHOUT PERMISSION FROM THE ENGINEER.
- L. ALL CONDUIT ROUTED IN AREAS SUBJECT TO MECHANICAL DAMAGE TO BE RIGID.

GENERAL LIGHTING NOTES

- A. COORDINATE LIGHTING WITH ARCHITECTURAL DRAWINGS PRIOR TO ORDERING TO CONFIRM LUMINAIRES WILL FIT IN INTENDED ARCHITECTURAL FEATURES, CEILING
- GRIDS, COVES, ETC. B. COORDINATE LIGHTING INSTALLATION REQUIREMENTS WITH SPRINKLER CONTRACTOR
- PRIOR TO SPRINKLER LINE INSTALLATION. C. ALL LIGHT SWITCHES, DIMMERS AND MOTION SENSORS TO CONTROL LIGHTING WITHIN THE ROOM THEY ARE LOCATED IN UNLESS OTHERWISE NOTED.
- D. ALL ROOM WALL SWITCHES, DIMMERS AND MOTION SENSORS TO BE SUBORDINATE TO
- THE LOW VOLTAGE SWITCHING ZONE THEY ARE LOCATED IN. E. ALL PHOTOCELLS TO CONTROL THE LUMINAIRES WITHIN DAYLIGHT ZONE THEY ARE
- LOCATED WITHIN. F. ALL MOTION SENSORS TO BE MOUNTED AT LEAST 3' AWAY FROM MECHANICAL

GENERAL POWER NOTES

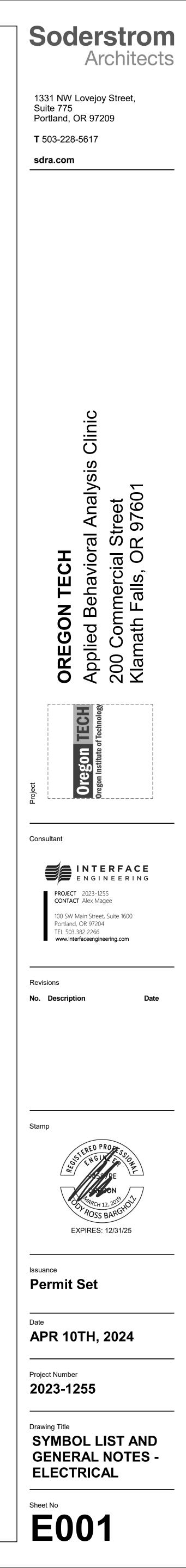
- A. USE #10 AWG FOR 20A, 120V CIRCUITS LONGER THAN 70'.
- B. USE #8 AWG FOR 20A, 120V CIRCUITS LONGER THAN 100'.

DIFFUSERS.



E001 SYMBOL LIST AND GENERAL NOTES - ELECTRICAL E002 LUMINAIRE SCHEDULE & SEQUENCE OF OP.

- E201 CEILING PLAN LIGHTING
- E301 FLOOR PLAN POWER
- E501 ONE LINE DIAGRAMS & SCHEDULES ELECTRICAL
- E700 DETAILS ELECTRICAL
- E800 SPECIFICATIONS ELECTRICAL



							LU	MINAI	RE SCHED	ULE								
TYP	DESCRIPTION	HOUSING	OPTICS	MOUNTING	FINISH	UL/IP RATING	DRIVER LOCATION	DIMMING CONTROL	INITIAL DELIVERED LUMENS	ССТ	CRI	RATED LIFE	LM/W	WATTAGE	VOLTAGE	MANUFACTURER	PRE-APPROVED PRODUCTS	REMARKS
'A2'	RECESSED LED LUMINAIRE; 2'L x 2'W x NOMINAL DIMENSIONS	ALUMINUM	WHITE FROST LENS	RECESSED	WHITE	DAMP	INTEGRAL	0-10V	3307	3500K	90	60,000 (L73)	130	29.2	120	METALUX	22FP3235C	
'A2-E	RECESSED LED LUMINAIRE; 2'L x 2'W x NOMINAL DIMENSIONS	ALUMINUM	WHITE FROST LENS	RECESSED	WHITE	DAMP	INTEGRAL	0-10V	3307	3500K	90	60,000 (L73)	130	29.2	120	METALUX	22FP3235CEL10W	PROVIDE EM BATTERY
'A4'	RECESSED LED LUMINAIRE; 4'L x 2'W x NOMINAL DIMENSIONS	ALUMINUM	WHITE FROST LENS	RECESSED	WHITE	DAMP	<varies></varies>	0-10V	4591	3500K	90	60,000 (L73)	111	41.4	120	METALUX	24FP4735C	
'A4-E	RECESSED LED LUMINAIRE; 4'L x 2'W x NOMINAL DIMENSIONS	ALUMINUM	WHITE FROST LENS	RECESSED	WHITE	DAMP	INTEGRAL	0-10V	4591	3500K	90	60,000 (L73)	111	41.4	120	METALUX	24FP4735CEL10W	PROVIDE EM BATTERY
'B'	RECESSED LED DOWNLIGHT LUMINAIRE; 5.66"DIA x 14.14"L x 13.08"W NOMINAL DIMENSIONS	ALUMINUM	HIGH REFLECTANCE UPPER REFLECTOR	RECESSED	WHITE	DAMP	INTEGRAL	0-10V	1000	3500K	90	50,000 (L70)	100	10.0	120	PORTFOLIO	LDSQ4C15D010 EU4C10209035 4LBCSSQ1MW	
'C'	SURFACE LINEAR LED LUMINAIRE; 4' NOMINAL DIMENSIONS	STEEL	ACRYLIC LENS	SURFACE	WHITE	DAMP	INTEGRAL	0-10V	3150	3500K	90	100,000 (L70)	105	30.0	120	CREE LIGHTING	LS4-40L-35K-10V-FD	
'SA'	SITE/AREA WALL MOUNTED LED LUMINAIRE; 11.5"W x 7"L x 9"H NOMINAL DIMENSIONS	DIE CAST ALUMINUM	CLEAR SAFETY GLASS	WALL MOUINTED AT 7'-0" A.F.G.	BLACK	WET	INTEGRAL	0-10V	1200	3000K	90	50,000 (L95)	126	10.0	120	LITHONIA LIGHTING WDGE2	WDGE2 LED P1-30K-90CRI-VW-MVOLT-DMG-DBLXD	
'SA-E	SITE/AREA WALL MOUNTED LED LUMINAIRE; 11.5"W x 7"L x 9"H NOMINAL DIMENSIONS	DIE CAST ALUMINUM	CLEAR SAFETY GLASS	WALL MOUINTED AT 7'-0" A.F.G.	BLACK	WET	INTEGRAL	0-10V	1200	3000K	90	50,000 (L95)	126	10.0	120		WDGE2 LED P1-30K-90CRI-VW-MVOLT-E10WH-DMG-DBLXD	PROVIDE EM BATTERY
'X'	EXIT SIGNS	THERMOPLASTIC	RED LENS	REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING CONDITIONS	BRUSHED ALUMINUM	UL DAMP	INTEGRAL	N/A	N/A	N/A	N/A	N/A	N/A	2.0	120	EVENLITE RAZOR SERIES; ISOLITE, PATHWAY, SURE-LITES TPX, BARRON LIGHTING, OR APPROVED	RZR3-EM-R-U-BA-CN-SD	

NOTES

- THIS LUMINAIRE SCHEDULE IS NOT COMPLETE WITHOUT A COPY OF THE PROJECT MANUAL CONTAINING THE ELECTRICAL SPECIFICATIONS. 1
- 2 DIMMING CONTROL PROTOCOL (0-10VDC, LINE VOLTAGE, DALI, ETC.) COMPATIBLE WITH LIGHTING CONTROL SYSTEM AS SPECIFIED AND SHOWN ON DRAWINGS.
- PROVIDE +/- 12 INCH ADJUSTABILITY IN AIRCRAFT CABLE LENGTH WHERE USED. 3
- COORDINATE ALL CEILING TYPES WITH LUMINAIRE LOCATIONS PRIOR TO ORDERING LUMINAIRES. COORDINATE INSTALLATION WITH REFLECTED CEILING PLAN. 4
- SPECIFIED MANUFACTURERS ARE BASIS OF DESIGN. SUBMIT ALTERNATES FOR APPROVAL PRIOR TO BID CLOSE. 5
- 6
- REMOTE BALLASTS/DRIVERS: UL LISTED FOR THEIR APPLICATION. BALLASTS/DRIVERS MARKED AS UL RECOGNIZED COMPONENT BUT NOT UL LISTED ARE SUBJECT TO REMOVAL AND REPLACEMENT AT NO COST TO OWNER. 7
- 8

						DL SEQUENCE OF OPERATIONS: SPACE BY SPACE	
ROOM NAME	OCCUPANCY SENSOR TYPE	LIGHTING CONTROL NETWORK CONNECTED	PHOTOSENSOR CONTROL	RECEPTACLE CONTROL	ALL LUMINAIRES CONFIGURED FOR CONTINUOUS DIMMING	CONTROL FUNCTIONS	PRODUCT BASIS OF DESIGN REMARKS
VESTIBULES, HALLWAYS, AND COMMONS	PASSIVE INFRARED	NO	NO	NO	YES	AUTO ON/OFF WITH OCCUPANCY SENSOR. NORMAL POWER LOSS WITHIN ZONE TRIGGERS EMERGENCY LUMINAIRES TO GO TO FULL BRIGHTNESS.	ALC, ALCS, IR
EXTERIOR BUILDING	NONE	NO	NO	NO	YES	AUTO ON/OFF WITH LUTRON TIME CLOCK. NORMAL POWER LOSS WITHIN ZONE TRIGGERS EMERGENCY LUMINAIRES TO GO TO FULL BRIGHTNESS, WHERE APPLICABLE.	ALC, ALCS,
RESTROOMS, JANITOR, AND LAUNDRY	PASSIVE INFRARED	NO	NO	NO	YES	AUTO ON/OFF WITH OCCUPANCY SENSOR. NORMAL POWER LOSS WITHIN ZONE TRIGGERS EMERGENCY LUMINAIRES TO GO TO FULL BRIGHTNESS.	ALC, ALCS, IR
OFFICE, PRIVATE THERAPY, TRAINING ROOM, AND COPIES	PASSIVE INFRARED	NO	NO	NO	YES	MANUAL ON/OFF AND DIMMING WITH WALL DIMMER. AUTO OFF WITH OCCUPANCY SENSOR. AUTO DIMMING WITHIN DAYLIGHT ZONES WITH PHOTOCELL WHERE INDICATED.	ALC, ALCS(x2), DM, IR, R
BREAK ROOM	PASSIVE INFRARED	NO	NO	NO	YES	MANUAL ON/OFF AND DIMMING WITH WALL DIMMER. AUTO OFF WITH OCCUPANCY SENSOR. AUTO DIMMING WITHIN DAYLIGHT ZONES WITH PHOTOCELL WHERE INDICATED. NORMAL POWER LOSS WITHIN ZONE TRIGGERS EMERGENCY LUMINAIRES TO GO TO FULL BRIGHTNESS.	ALC, ALCS(x2), DM, IR, R
ALL OTHER ROOMS	PASSIVE	NO	NO	NO	YES	MANUAL ON/OFF AND DIMMING WITH WALL DIMMER. AUTO OFF WITH OCCUPANCY SENSOR. AUTO DIMMING WITHIN DAYLIGHT ZONES WITH PHOTOCELL WHERE INDICATED.	ALC, ALCS, DM, IR

PRODUCT BASIS OF DESIGN LEGEND

DM - DIMMING WALL SWITCH - LUTRON PICO 3 BUTTON WITH RAISE LOWER AND PRESET WITH WALL MOUNT KIT - UPJ2-3BRL-xx-L01

IR - CEILING MOUNTED PASSIVE INFRARED OCCUPANCY SENSOR - ULRF2-OCR2B-P-WH

PC - WIRELESS DAYLIGHT SENSOR - LRF2-DCRB-WH

SC - SCENE SELECTION WALL STATION LUTRON PICO 4 BUTTON CONTROLLER WITH WALL MOUNT KIT - PJ2-4B-WH-xx

EM - EMERGENCY AREA LIGHTING CONTROLLER - LUTRON VIVE EMERGENCY POWERPACK WITH 0-10V DIMMING - RMJS-8T-DV-B-EM

R - HUBBELL HEAVY DUTY CONTROL UNIT - CU300HDU-CPN6814

ALC - AREA LIGHTING CONTROLLER - LUTRON VIVE POWERPACK WITH 0-10V DIMMING - URMJS-8T-DV-B

ELV - VIVE POWPAK PHASE SELECT DIMMING - RMJS-PNE-DV

ALCS - VIVE POWPAK 24V CONTACT CLOSURE - URMJS-CCO1-24B

GENERAL NOTES:

1. EMERGENCY LIGHTING DIMS/ON-OFF WITH NORMAL LIGHTING UNLESS NORMAL POWER IS LOST THEN EMERGENCY LUMINAIRES ARE TO TURN ON AND GO TO FULL BRIGHTNESS. 2. EXIT SIGNS TO BE UNSWITCHED.

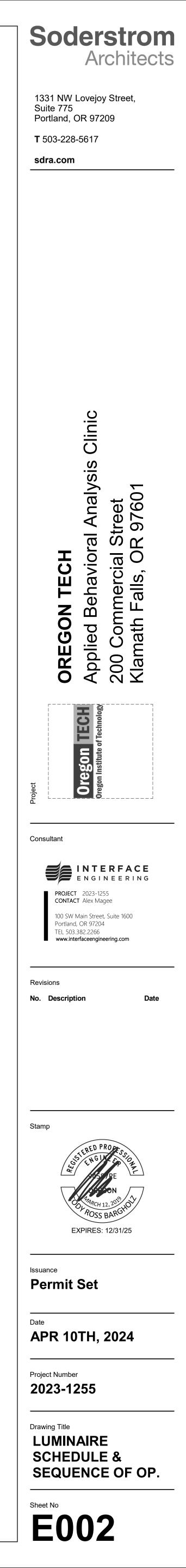
3. CONTRACTOR TO SUPPLY AND INSTALL LUTRON VIVE WIRELESS HUBS TO CONTROL ALL LIGHTING INTERIOR AND EXTERIOR TO THE BUILDING. LOCATIONS ARE TO BE DETERMINED BY MANUFACTURER.

4. ALL LUMINAIRE CONTROL MODULES AND AREA CONTROL MODULES ARE TO BE HARDWIRE AND INSTALLED WITHIN CONCEALED ACCESSIBLE LOCATIONS SUCH AS ABOVE T-BAR CEILINGS OR WITHIN SERVICE ROOMS.

5. CUSTOM SCENE BUTTONS ARE TO BE SELECTED BY OWNER PRIOR TO ORDERING.

PROVIDE SUBMITTALS THAT INCLUDE THE LUMINAIRE, LAMP AND DRIVER INFORMATION OF EACH LUMINAIRE, WITH APPLICABLE OPTIONS CLEARLY CHECKED OR HIGHLIGHTED. SUBMITTALS NOT INCLUDING THIS INFORMATION WILL BE RETURNED AS REJECTED BY THE ENGINEER OF RECORD.

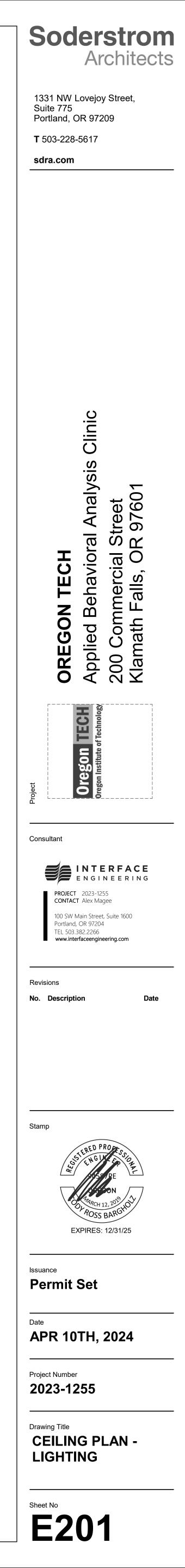
LABEL ALL REMOTE DRIVERS TO SHOW LUMINAIRE TYPE IDENTIFICATION AND SOURCE CIRCUIT. PROVIDE WIRING BETWEEN REMOTE DRIVER AND LUMINAIRE AS RECOMMENDED BY MANUFACTURER. DO NOT EXCEED MAXIMUM DISTANCE RECOMMENDED BY MANUFACTURER BETWEEN DRIVER AND FURTHEST LUMINAIRE.

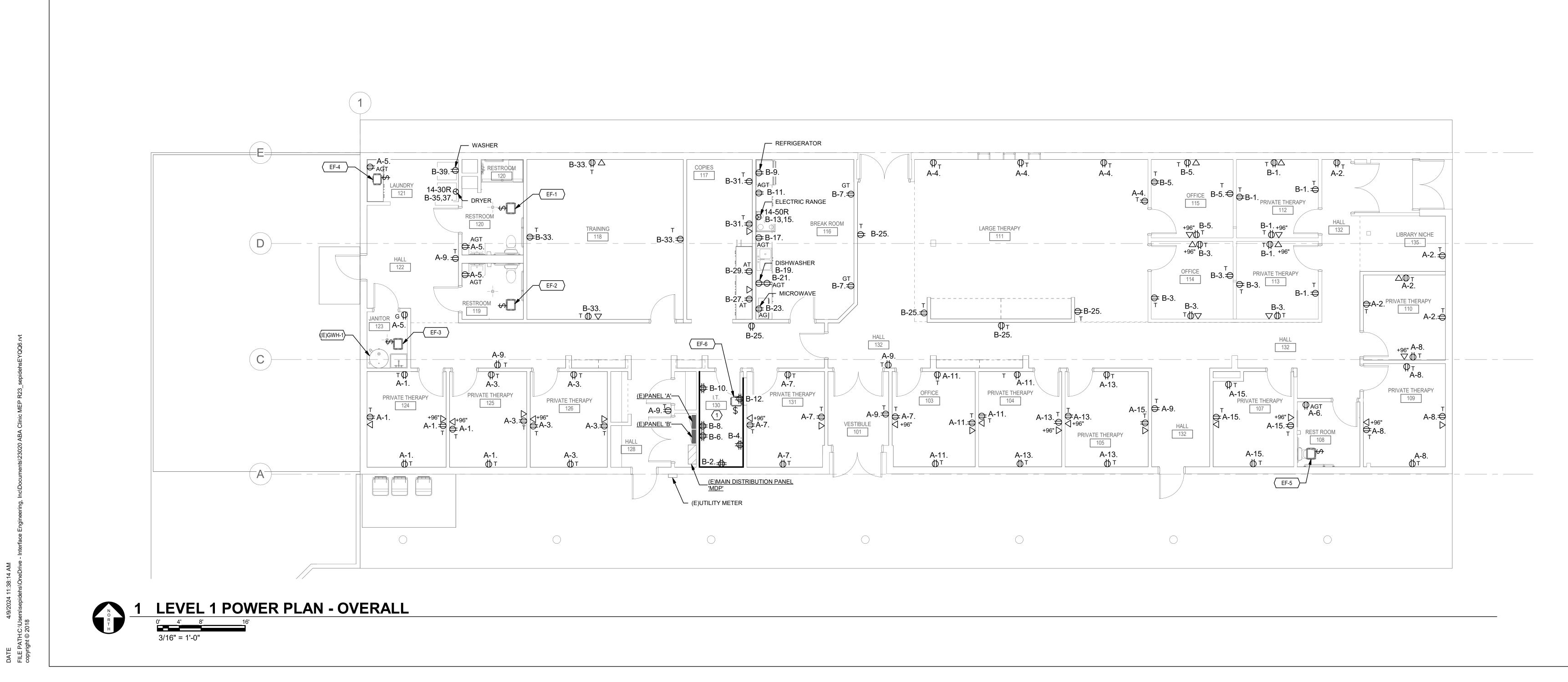




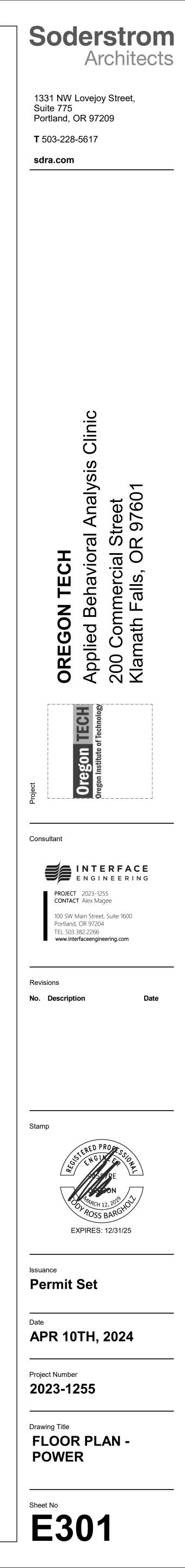
GENERAL SHEET NOTES

- A. CONNECT NEW LUMINAIRES TO EXISTING NORMAL LIGHTING CIRCUIT MADE AVAILABLE BY DEMOLITION OF EXISTING NORMAL LIGHTS, UNLESS OTHERWISE NOTED.
- B. PROVIDE BOTH SWITCHED AND UNSWITCHED CIRCUIT LEGS FOR EMERGENCY LIGHTING LUMINAIRES DESIGNATED WITH THE SUBSCRIPT 'EM'.









		MAIN LUG ONLY			MOU	NTING		
		BUS AMPACITY:	400 A		ENCLO			
			120/240 V, 1PH, 3 SEE ONE-LINE D		LOCA SUPPLY I	ATION: FROM:		
						Load (V	A)]
скт	LOAD D	ESCRIPTION	Number of Poles	FRAME SIZE	TRIP RATING	Α	В	NOTES
1,2	PANEL 'A'		2	225 A	150 A	15207.6	15540.0	
3,4	PANEL 'B'		2	400 A	250 A	18757.6	20322.2	
5,6	(E)MECHANICAL EQU	IPMENT	2	100 A	20 A	5760.0	5760.0	
Motor (ype Definitions: 125% largest Motor + 100 eptacles (to 10kVA 100%	e ,	•) Demand as per N oad (Non-Contir	JEC Table 220.56)		W=Water Heater X = X-Rays (Dem	(125%) and per NEC 660.6)
	ting Load 30-day metered	· · · ·		is Load (125%)			H=Heating (100%	• • •
	evator (Demand as per NI	. ,	L = Lighting (1	25%)			EV = Electric Veh	
Load T	уре	Connected Load	NEC Demand	d Factor NE	C Demand Load		Panel 1	Fotals
L		2639.8	125.00	%	3299.8			
Motor		11667.6	124.68	%	14547.6	Total C	Connected Load:	81347.4
		16380.0	80.53%	/o	13190.0	Tot	al NEC Demand:	81697.4
R	G 18980.0		100.00	%	18980.0	Total Cor	nnected Current:	
								340 A

	MAIN LUG ONLY BUS AMPACITY: 150 A EQUIPMENT RATING: 120/240 V, 1 FOR AIC RATING SEE ONE-LIN								MOUNT NCLOS LOCAT	ure: 'Ion:	TYPE 1	E		Accessories:		
										-						
							Load	(VA)								
скт	Description/Location	Tuno	C.B.	Pole	Note	Α	В	A	В	Noto	Pole	C P	Turno	Decor	intion/Location	ск
1	Description/Location R PRIVATE THERAPY 124,125		<u>с.в.</u> 20 А	1	Note	1,080		900		Note		C.B.			iption/Location E THERAPY 110, 111	
3	R PRIVATE THERAPT 124,125 R PRIVATE THERAPY 125,126	R R	20 A 20 A	-		1,000	1,080	900	720		1	20 A 20 A	R		ATE THERAPY 110, 111	2
				1		000	1,080	180	720	1			R			4
5	R RESTROOM 129, 120, JANITOR	R	20 A	1		900	000	180	000	-	1	20 A	R		R RR 108	6
7	R PRIVATE THER. 131, OFFICE 103	R	20 A	1		1 000	900	0	900	1	1	20 A	R		THERAPY 109, 110	8
9	R HALL122, 132, VEST 101	R	20 A	1		1,080	000	0	0		1	20 A		. ,		10
11	R PRIVATE THER. 104,0FFICE 103	R	20 A	1	4	000	900	0	0		1	20 A				12
13	R PRIVATE THERAPY 104,105	R	20 A	1	1	900	000	0	0		1	20 A		. ,		14
15	R PRIVATE THERAPY 105,107	R	20 A	1		5.040	900	5.040	0		1	20 A		. ,		16
17	(E)FURNACE		60 A	2		5,040	5.0.40	5,040	5.0.40		2	60 A		(E)FURNACE	18
19							5,040		5,040							20
21	(E)BUSSED SPACE			1				88		1	1	15 A	Motor		EF-1,2,4	22
23	(E)BUSSED SPACE			1		107.1			60		1	15 A	Motor		EF-3,5,6	24
	Total Connected load Ph. A Total Connected load Ph. B					127 A 130 A 0 A			el emand	30.7 k 30.5 k				128.1 A 127.3 A		
Notos																
1. PR(OVIDE NEW BREAKER AT EXISTING F	PANEL.														
Load	OVIDE NEW BREAKER AT EXISTING F															
1. PR	OVIDE NEW BREAKER AT EXISTING F			K = Ki	tchen (E	Demand	as per N	EC Table	e	C = 0	Continuo	us Load	(125%)	X = X-Rays (E	emand per NEC 660.6)	
1. PR Load Motor	OVIDE NEW BREAKER AT EXISTING F	motors)			•	Demand a	•						. ,	X = X-Rays (E H = Heating (1	• • •	
1. PR Load Motor R = R	DVIDE NEW BREAKER AT EXISTING F Type Definitions: (125% largest Motor + 100% remaining	motors)		G = G	eneral L		n-continu	uous) (10	0%)	I	L = Light		%)	H = Heating (• • •	
1. PR Load Motor R = R E = E	DVIDE NEW BREAKER AT EXISTING F Type Definitions: (125% largest Motor + 100% remaining eceptacles (to 10kVA100%, over 10 kVA	motors) \ 50%)		G = G EL = E	eneral L Ievator	oad (No	n-continu	uous) (10 NEC Ta	0%)	 W =	L = Light	ing (125	%)	H = Heating (100%) Vehicle Changer	
1. PR Load Motor R = R E = E	DVIDE NEW BREAKER AT EXISTING F Type Definitions: (125% largest Motor + 100% remaining eceptacles (to 10kVA100%, over 10 kVA isting Load 30-day metered (125%)	motors) \ 50%)		G = G EL = E NEC D	eneral L Ievator	oad (Nor (Deman Factor	n-continu	uous) (10 NEC Ta NEC De	00%) ble	 W =	L = Light	ing (125	%)	H = Heating (EV = Electric	100%) Vehicle Changer	
1. PR Load Motor R = R <u>E = E</u>	DVIDE NEW BREAKER AT EXISTING F Type Definitions: (125% largest Motor + 100% remaining ecceptacles (to 10kVA100%, over 10 kVA isting Load 30-day metered (125%) .oad Type Connected L	motors) \ 50%)		G = G EL = E NEC D	eneral L Elevator emand	oad (Not) (Deman) Factor	n-continu	uous) (10 NEC Ta NEC De	00%) ble emand L	 W =	L = Light	ing (125 Heater (1	%) 125%)	H = Heating (EV = Electric	l00%) Vehicle Changer Itals	
1. PR Load Motor R = R <u>E = E</u> Motor	DVIDE NEW BREAKER AT EXISTING F Type Definitions: (125% largest Motor + 100% remaining eceptacles (to 10kVA100%, over 10 kVA isting Load 30-day metered (125%) .oad Type Connected L 147.6	motors) \ 50%)		G = G EL = E NEC D	eneral L Elevator emand 108.749	oad (Not (Demand Factor	n-continu	Jous) (10 NEC Ta NEC De	00%) ble emand L 160.5	 W =	L = Light	ing (125 Heater (1	%) 125%) otal Con	H = Heating (EV = Electric Panel To	100%) Vehicle Changer Itals 30747.6 VA	· · · · · · · · · · · · · · · · · · ·
1. PR Load Motor R = R <u>E = E</u> Motor R	DVIDE NEW BREAKER AT EXISTING F Type Definitions: (125% largest Motor + 100% remaining ecceptacles (to 10kVA100%, over 10 kVA isting Load 30-day metered (125%) .oad Type Connected L 147.6 10440.0	motors) \ 50%)		G = G EL = E NEC D	eneral L Elevator emand 108.74% 97.89%	oad (Not (Demand Factor	n-continu	Jous) (10 NEC Ta NEC De	00%) ble emand L 160.5 0220.0	 W =	L = Light	ing (125 Heater (1	%) 125%) otal Con Total N	H = Heating (EV = Electric Panel Tc nected Load:	100%) Vehicle Changer Itals 30747.6 VA 30540.5 VA	

MAIN LUG ONLY MOUNTING: SURFACE Accessories: BUS AMPACITY: 150 A ENCLOSURE: TYPE 1 EQUIPMENT RATING: 120/240 V, 1PH, 3 WIRE LOCATION: FOR AIC RATING SEE ONE-LINE DIAGRAM SUPPLIED FROM: MDP																
							Load	(VA)								
скт	Description/Location	Туре	С.В.	Pole	Note	Α	В	Α	В	Note	Pole	С.В.	Туре	Descr	iption/Location	скт
1	R PRIVATE THERAPY 124,125	R	20 A	1		1,080		900			1	20 A	R	R R PRIVAT	E THERAPY 110, 111	2
3	R PRIVATE THERAPY 125,126	R	20 A	1			1,080		720		1	20 A	R	R R PRIV	ATE THERAPY 111	4
5	R RESTROOM 129, 120, JANITOR	R	20 A	1		900		180		1	1	20 A	R		R RR 108	6
7	R PRIVATE THER. 131, OFFICE 103	R	20 A	1			900		900	1	1	20 A	R	R PRIVATE	THERAPY 109, 110	8
9	R HALL122, 132, VEST 101	R	20 A	1		1,080		0			1	20 A		(E)SP	ARE BREAKER	10
11	R PRIVATE THER. 104, OFFICE 103	R	20 A	1			900		0		1	20 A		(E)SP	ARE BREAKER	12
13	R PRIVATE THERAPY 104,105	R	20 A	1	1	900		0			1	20 A		(E)SP	ARE BREAKER	14
15	R PRIVATE THERAPY 105,107	R	20 A	1			900		0		1	20 A		(E)SP	ARE BREAKER	16
17	(E)FURNACE		60 A	2		5,040		5,040			2	60 A		(E	FURNACE	18
19							5,040		5,040							20
21	(E)BUSSED SPACE			1				88		1	1	15 A	Motor		EF-1,2,4	22
23	(E)BUSSED SPACE			1					60		1	15 A	Motor		EF-3,5,6	24
Notes	Total Connected load Ph. A Total Connected load Ph. B					127 A 130 A 0 A			el emand	30.7 k 30.5 k				128.1 A 127.3 A		
Load Motor R = Re E = Ex	DVIDE NEW BREAKER AT EXISTING Type Definitions: (125% largest Motor + 100% remaining eceptacles (to 10kVA100%, over 10 kV sisting Load 30-day metered (125%)	i motors) A 50%)		G = G EL = E	eneral L Elevator	.oad (No	as per N n-contini d as per	uous) (10 NEC Ta	00%) ble	ו = W	L = Ligh	ous Load ting (125 Heater (5%)	H = Heating (EV = Electric	Vehicle Changer	
	Load Type Connected I	.0a0							emand L	Joau				Panel To	lais	
Motor					108.749				160.5				atal Car	neeted Least-	20747 6 \/A	
R	10440.0				97.89%				0220.0			-		nected Load: IEC Demand:		
Spare	20160.0				100.009	0		2	0160.0			Tot		cted Current:		
												Iotal I		and Current:	121.3 A	

	BUS AMPACITY: 250 A EQUIPMENT RATING: 120/240 V, FOR AIC RATING SEE ONE-LIN							E	MOUNT NCLOS LOCAT	URE: ION:	TYPE 1	CE	ļ	Accessories:	
		1		1			Load	(VA)					1		
скт	Description/Location	Type	С.В.	Pole	Note	A	В	A	в	Note	Pole	C.B.	Type	Description/Location	скт
1	R PRIVATE THERAPY 112, 113	Type R	с.в. 20 А	1	Note	1,080		500		Note	1	С.В. 20 А	Type G	R IT 130	2
3	R PRIVATE THER. 113 & OFFICE	R	20 A	1		1,000	1,080	500	500		1	20 A 20 A	G	R IT 130	4
5	R OFFICE 115	R	20 A	1		720	1,000	500	500		1	20 A	G	R IT 130	6
7	R BREAK ROOM	R	20 A	1		120	360	000	500		1	20 A	G	R IT 130	8
9	GREFRIGERATOR	G	20 A	1	1	1,200		500	000		1	20 A	G	R IT 130	10
11	R BREAK ROOM 116	R	20 A	1		.,	180		500		1	20 A	G	R IT 130	12
13	G RANGE	G	50 A	2	1	4,800		1,378			1	20 A	L	L LIGHT	14
15						,	4,800	,	1,192		1	20 A	L	L LIGHT	16
17	R BREAK ROOM 116	R	20 A	1		180		70			1	20 A	L	L EXTERIOR LIGHT	18
19	G DISHWASHER	G	20 A	1	1		1,200		0		1	20 A		(E)SPARE BREAKER	20
21	R BREAK ROOM 116	R	20 A	1		180		0			1	20 A		(E)SPARE BREAKER	22
23	G MICROWAVE	G	20 A	1			1,800		0		1	20 A		(E)SPARE BREAKER	24
25	R HALL 132	R	20 A	1		900		0			1	20 A		(E)SPARE BREAKER	26
27	R COPIES 117 COPY	G	20 A	1			800		0		1	20 A		(E)SPARE BREAKER	28
29	R COPIES 117	R	20 A	1		180		0			1	20 A		(E)SPARE BREAKER	30
31	R COPIES 117	R	20 A	1			360		1,920		2	20 A		(E) LOAD	32
33	R TRAINING 118	R	20 A	1		720		1,920							34
35	G DRYER	G	30 A	2	1		90		1,920		2	20 A		(E) LOAD	36
37						90		1,920							38
39	G WASHER	G	20 A	1	1		1,200		1,920		2	20 A		(E) LOAD	40
41	(E)SPARE BREAKER		20 A	1		0		1,920							42
	Total Connected load Ph. A					156 A		Pan		39.1 k				162.8 A	
	Total Connected load Ph. B					169 A		Total De	emand	39.7 k	VA			165.6 A	
Notes						0 A									
	ACE EXISTING BREAKER WITH NEW	GFCI BF	REAKER												
Load ⁻	Type Definitions:														
Motor	(125% largest Motor + 100% remaining	motors)		K = Ki	tchen (I	Demand	as per N	EC Table	ə	C = C	Continuo	us Load	(125%)	X = X-Rays (Demand per NEC 660.6)	
	eceptacles (to 10kVA100%, over 10 kV/	A 50%)				•		uous) (10	,		-	ting (125	,	H = Heating (100%)	
<u>= E</u> x	isting Load 30-day metered (125%)			<u>EL = E</u>	levator	(Deman	d as per	NEC Tal	ole	=	Water	Heater (125%)	EV = Electric Vehicle Changer	
Ī	.oad Type Connected L	oad		NEC D	emand	Factor		NEC De	mand L	oad				Panel Totals	

Motor (125% largest Mo	otor + 100% remaining motors)	K = Kitchen (Demand as	per NEC Table	C = Con	tinuous Load (125%)	X = X-Rays (D	Demand per NEC 660.6)
R = Receptacles (to 10)	<va100%, 10="" 50%)<="" kva="" over="" td=""><td>G = General Load (Non-c</td><td>ontinuous) (100%)</td><td>L =</td><td>Lighting (125%)</td><td colspan="2">5%) H = Heating (100%)</td></va100%,>	G = General Load (Non-c	ontinuous) (100%)	L =	Lighting (125%)	5%) H = Heating (100%)	
E = Existing Load 30-da	ay metered (125%)	EL = Elevator (Demand a	s per NEC Table	W = W	/ater Heater (125%)	EV = Electric	Vehicle Changer
Load Type	Connected Load	NEC Demand Factor	NEC Demand	Load		Panel To	otals
L	2639.8	125.00%	3299.8				
G	18980.0	100.00%	18980.0		Total Cor	nnected Load:	39079.8 VA
R	5940.0	100.00%	5940.0		Total	NEC Demand:	39739.8 VA
Spare	11520.0	100.00%	11520.0		Total Conne	ected Current:	162.8 A
					Total NEC Den	mand Current:	165.6 A

MECH		ΕΟυΙ	PM	ENT				CHEDULE
CRIPTION	LOCATION	VOLTS	PH	LOAD(VA)	моср	CIRCUIT NUMBER	WIRE / CONDUIT	NOTES
EF-1	RESTROOM 120	120	1	18.0	15	A-22	202	
EF-2	RESTROOM 119	120	1	18.0	15	A-22	202	
EF-3	JANITOR 123	120	1	18.0	15	A-24	202	
EF-4	LAUNDRY 121	120	1	51.6	15	A-22	202	
EF-6	IT 130	120	1	24.0	15	A-24	202	
EF-6	RESTROOM 108	120	1	18.0	15	A-24	202	

	MECHANICAL EQUIPMENT CONNECTION SCHEDULE												
SYMBOL	DESCRIPTION	LOCATION	VOLTS	PH	LOAD(VA)	MOCP	CIRCUIT NUMBER	WIRE / CONDUIT	NOTES				
EF-1	EF-1	RESTROOM 120	120	1	18.0	15	A-22	202					
EF-2	EF-2	RESTROOM 119	120	1	18.0	15	A-22	202					
EF-3	EF-3	JANITOR 123	120	1	18.0	15	A-24	202					
EF-4	EF-4	LAUNDRY 121	120	1	51.6	15	A-22	202					
EF-6	EF-6	IT 130	120	1	24.0	15	A-24	202					
EF-6	EF-6	RESTROOM 108	120	1	18.0	15	A-24	202					

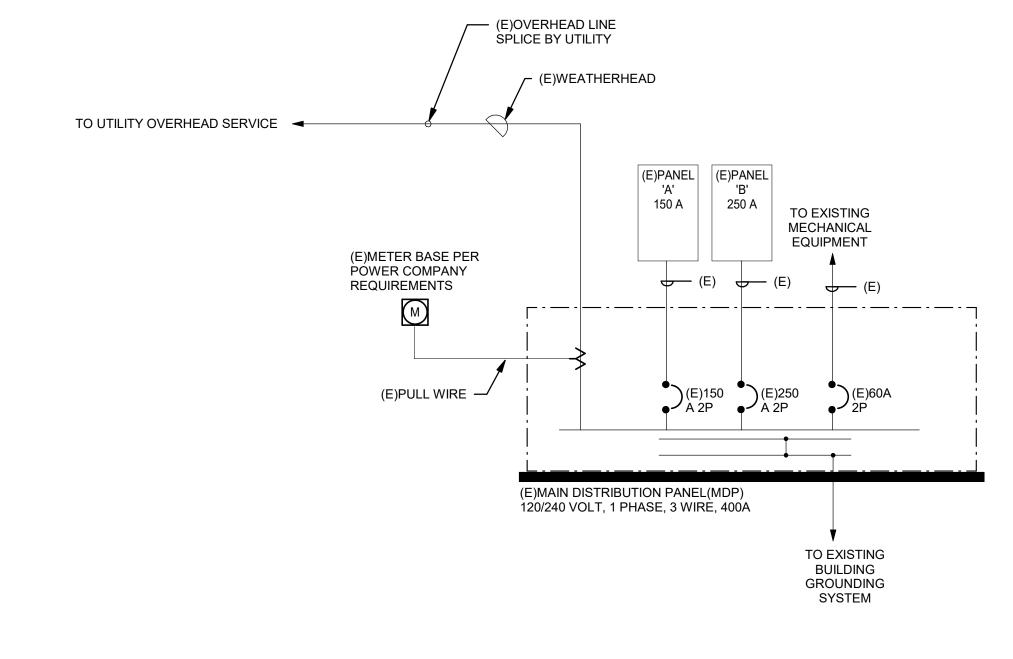
GENERAL MECHANICAL EQUIPMENT CONNECTION NOTE: A. THE ABOVE INFORMATION IS FOR A SPECIFIC MANUFACTURER. ACTUAL MANUFACTURER FOR EQUIPMENT MAY BE DIFFERENT. COORDINATE WITH MECHANICAL EQUIPMENT SUBMITTALS FOR LOADS AND OVER CURRENT PROTECTION REQUIREMENTS PRIOR TO INSTALLATION OF WIRING.

B. MOCP = MAXIMUM OVER CURRENT PROTECTION. MCA = MINIMUM CIRCUIT AMPACITY

C. PROVIDE DISCONNECTING MEANS FOR EACH ITEM OF EQUIPMENT LISTED IN THE SCHEDULE ABOVE, EXCEPT AS SPECIFICALLY NOTED OTHERWISE IN SCHEDULE NOTES, BELOW. MECHANICAL EQUIPMENT CONNECTION SCHEDULE NOTES

 WIRE/CONDUIT SCHEDULE

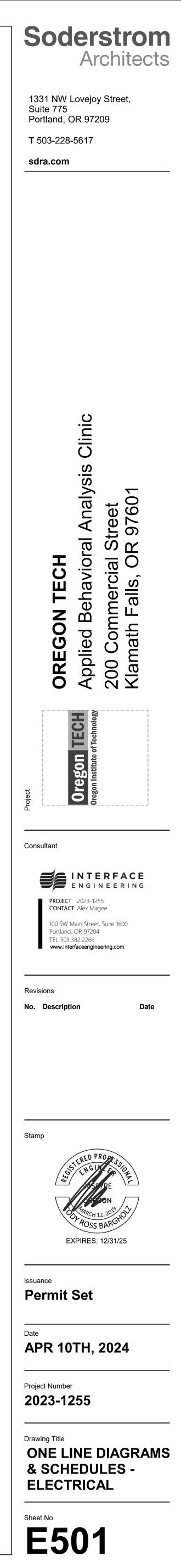
 202
 2 #12 CU, 1 #12 CU GND., IN 3/4" C.

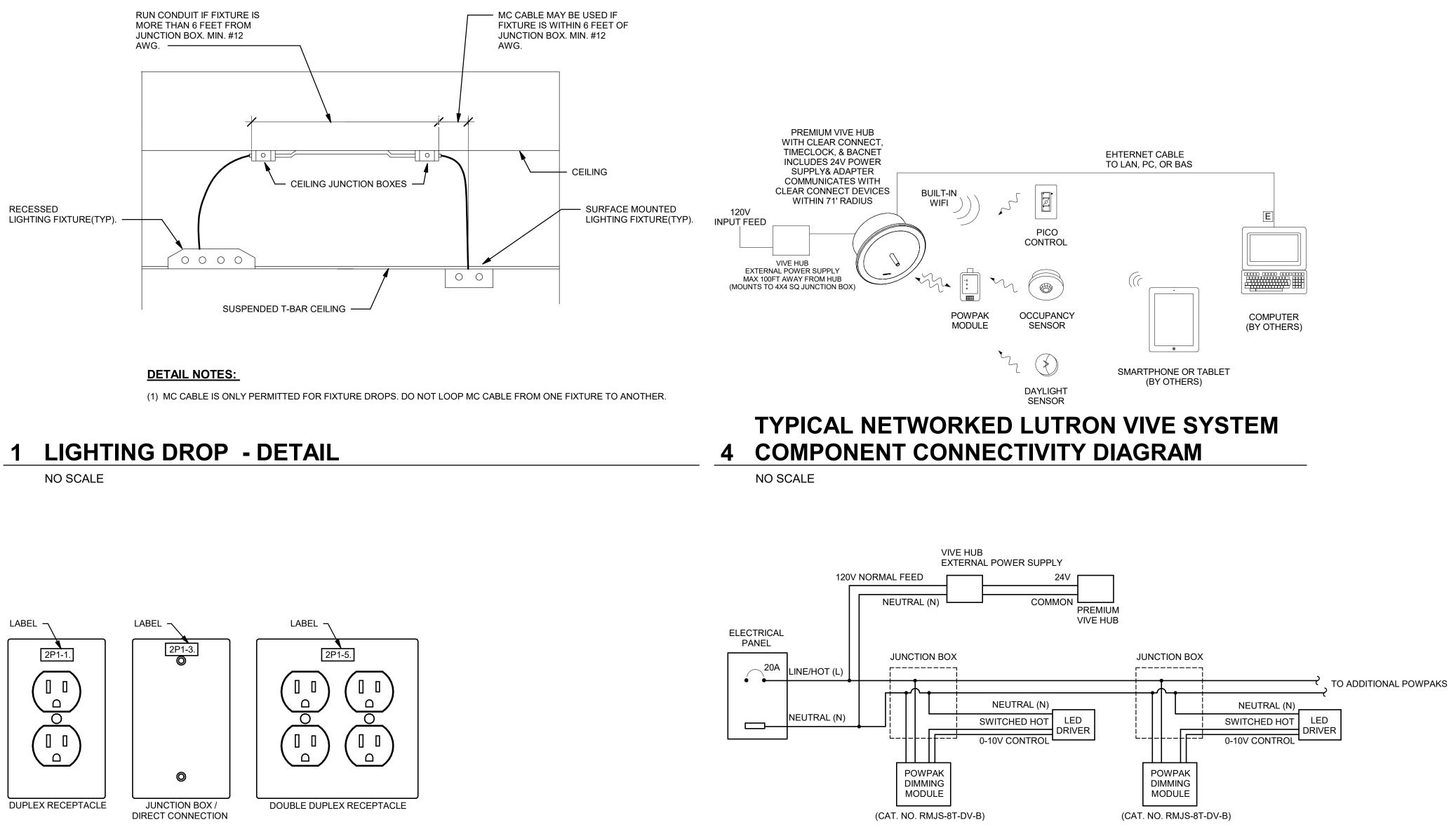


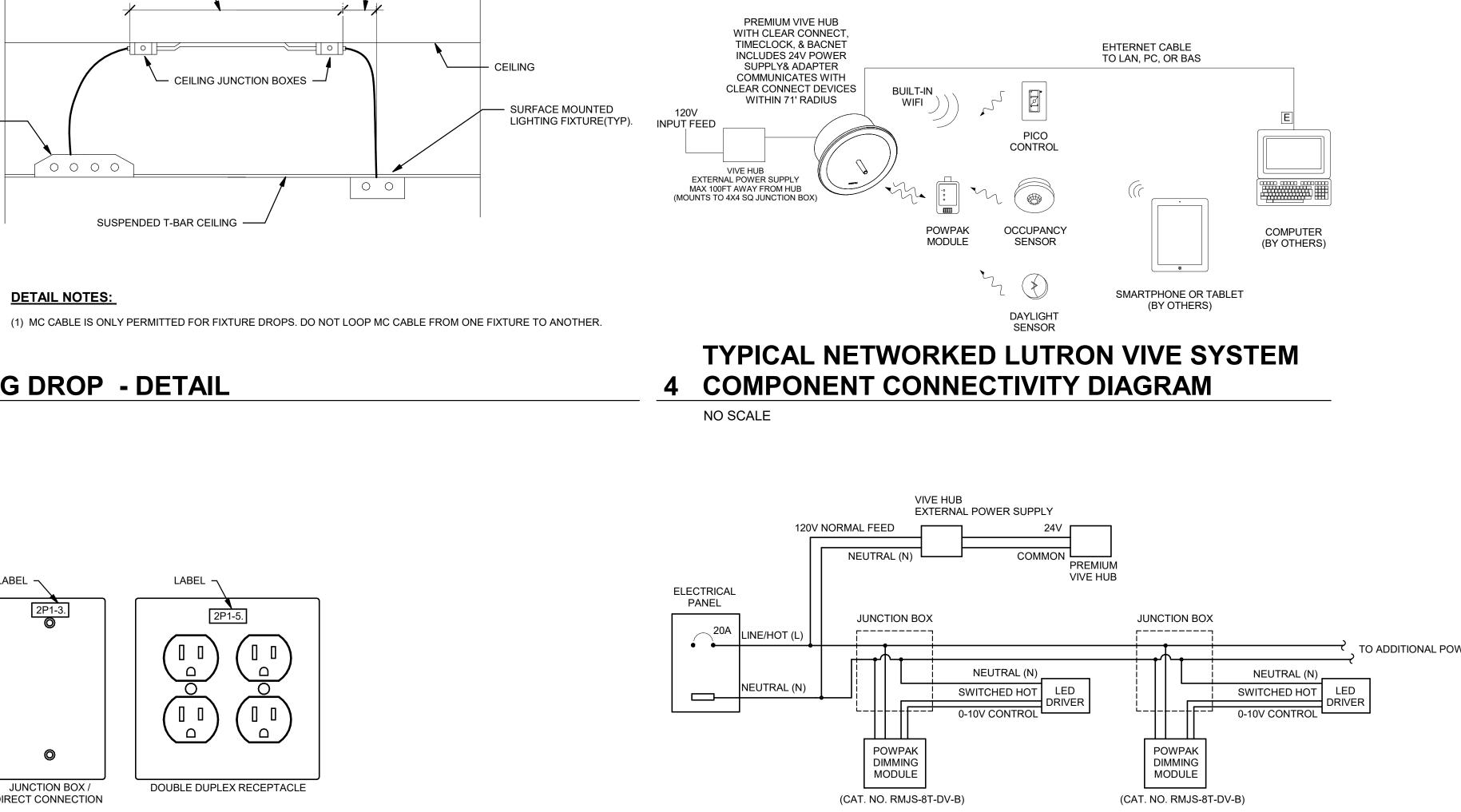


GENERAL SHEET NOTES A. EXISTING PANEL CONNECTIONS ARE BASED ON LIMITED SITE OBSERVATION. CONTRACTOR TO VERIFY ACTUAL PANEL CONNECTIONS.

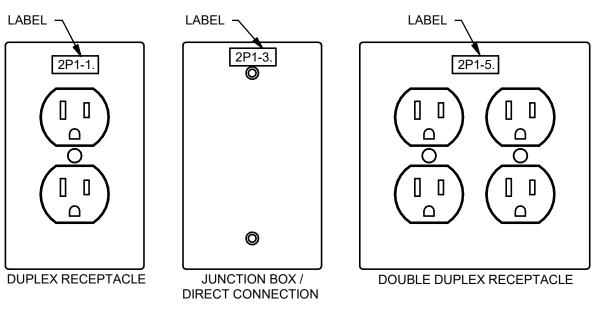
B. CONTRACTOR TO TEST EXISTING GROUND SYSTEM AND PATH ARE EFFECTIVE GROUNDING PATH PER NEC AND PROVIDE RESULT TO OWNER AND ENGINEER FOR REVIEW.



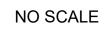


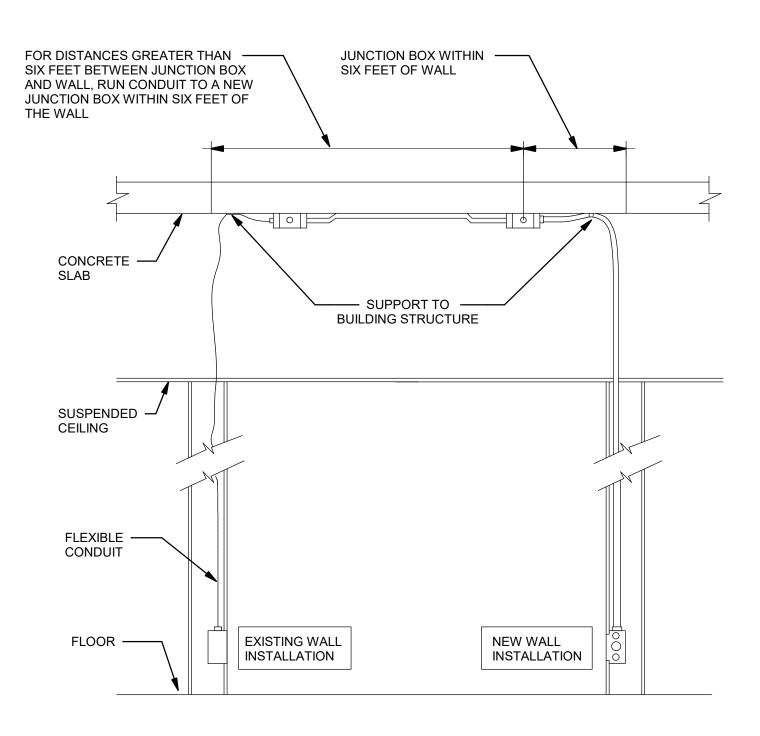












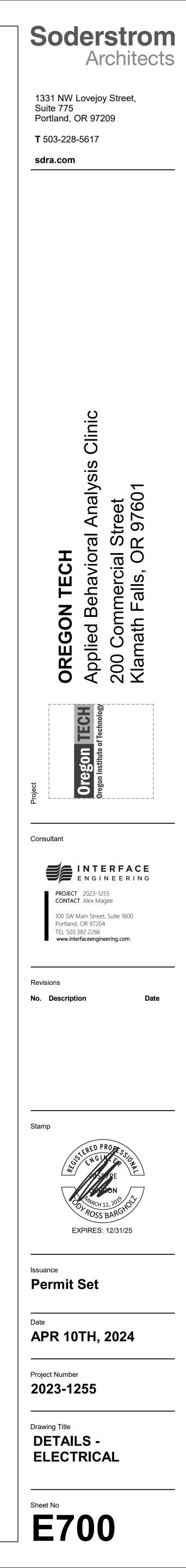
GENERAL DETAIL NOTES:

3 POWER DROP DETAIL

NO SCALE

- 1. NEW WALL INSTALLATION RUN CONDUIT FROM JUNCTION BOX DOWN TO FIRST DEVICE.
- 2. EXISTING WALL INSTALLATION RUN FLEX OR MC CABLE FROM JUNCTION BOX DOWN TO DEVICE. 3. ALL CONDUITS ARE TO BE DIRECTLY SUPPORTED FROM SLAB.
- 4. COORDINATE ROUTE WITH OTHER TRADES TO AVOID CONFLICTS WITH ACCESS.

5 LUTRON VIVE SYSTEM LIGHTING CONTROL DIAGRAM NO SCALE



- 1 <u>GENERAL</u>
- 1.1 The general requirements, instructions to bidders, this specification and any addenda hereto form part of the contract documents and shall be read in conjunction with them. Work is to include the furnishing of all labor and materials unless specifically noted otherwise to complete and put into operating condition all electrical systems as indicated on the drawings and specified herein.
- 2 STANDARD OF MATERIAL AND WORKMANSHIP
- 2.1 All materials are to be new and of the quality specified and are to be UL listed or CSA approved. Where equipment or materials are specified by technical description only, they shall be of the best commercial quality obtainable for the purpose.
- 2.2 Qualified tradesmen shall execute all work in a neat and workmanlike manner. Electrical trade shall keep a competent foreman and necessary assistants all satisfactory to the engineer on the job during the progress of the work.
- 3 FIRE PROTECTION AND SMOKE SEALING
- 3.1 Where cables, conduits, bus ducts or similar electrical equipment pass through fire rated assemblies such as floors, walls and ceilings, the fire rating of these assemblies shall be maintained by using engineer approved and UL listed firestop materials. Provide manufacturer literature showing that the proposed firestop system is a UL listed system for the proposed application.
- 3.2 Where cables, conduits, bus ducts or similar electrical equipment pass through smoke rated assemblies such as floors, walls and ceilings, the smoke rating of these assemblies shall be maintained by using engineer approved and UL listed materials. Provide manufacturer literature showing that the proposed system is a UL listed system for the proposed application.
- 3.3 The systems used to comply with the smoke sealing and fire protection requirements shall be installed as per the manufacturer recommendations. The manufacturer representative shall witness and confirm that the system has been installed in compliance with manufacturer recommendations and the UL listing for the specific installation.
- 3.4 This contractor shall provide two letters to the engineer at the completion of the job as follows:
- .1 A letter on the company official letterhead signed by an official of the contracting company with signing authority stating that the systems have been installed as per the manufacturer recommendations.
- .2 A letter on the company official letterhead signed by an official of the manufacturer representative company with signing authority stating they have inspected the systems and that the systems have been installed as per manufacturer recommendations and the UL listing for the specific installations. 3.5 This contractor shall allow for all costs relating to the installation of sealing and fire protection materials for electrical installations, witnessing by the manufacturer representatives
- and preparation of the letters. 4 FLAME RATING OF CABLES
- 4.1 Cables not installed in enclosed conduit shall be minimum CMP/FT6 rated. Typical examples are: cables in cable tray and cables used for grounding cable trays.
- 5 UNIFORMITY OF EQUIPMENT
- 5.1 Unless otherwise specifically called for in the specifications, uniformity of manufacture shall be maintained for any particular item throughout the building.

6 DRAWINGS AND SPECIFICATION

- 6.1 The drawings and specifications are complementary each to the other and what is called for by one shall be binding as if called for by both.
- 6.2 Should any discrepancy appear between the drawings and specifications which leaves the electrical trade in doubt as to the true intent and meaning of the plans and specifications, a ruling shall be obtained from the Engineer. If this is not done, it will be assumed that the most expensive alternate has been allowed for.
- 7 <u>CODES, PERMITS AND INSPECTION</u>
- 7.1 The installation shall comply with the requirements of the currently adopted edition of the National Electrical Code and the regulations of the Authority Having Jurisdiction.
- 7.2 The electrical trade shall obtain all permits required and display them in the electrical room.
- 8 EXAMINATION OF THE SITE
- 8.1 Prior to submitting this bid, the electrical trade is to carefully examine the site and ascertain all conditions, which will affect the electrical trade. No extras will be allowed for work resulting from conditions that would have been evident upon a thorough examination of the site.
- 9 <u>CLEAN UP</u>
- 9.1 The electrical trade and subtrades are to at all times during construction, keep the site free of all debris, boxes, packing, etc., resulting from work of this trade.
- 9.2 At the completion of the work, the electrical installation shall be left in a clean finished condition to the satisfaction of the engineer.
- 9.3 All luminaries and electrical devices are to be washed, cleaned of grease, dirt and lint as required.
- 10 SETTING OUT OF THE WORK
- 10.1 The electrical trade is responsible for correcting all work-completed contrary to the intent of the drawings and specifications and bear all cost for same. Where the intent of the drawings and specifications is not clear, the electrical contractor is to obtain the clarification of the engineer before proceeding with the work. 10.2 The electrical trade is to give the work personal supervision, lay out their own work, do all necessary leveling and measuring or employ a competent engineer to do so. Figures,
- full size and detail drawings shall take precedence over scale measurements. 10.3 Where any equipment supplied by the electrical trade must be built in with the work of other contractors, this contractor is responsible for the supplying of the equipment to be
- built in or measurements to allow necessary openings to be left so as not to hold up the work. 10.4 Electrical trade is responsible for any damage caused the owner or any of the other trades by improper location or carrying out of his work.

11 LOCATION OF OUTLETS

11.1 Engineer reserves the right to change location of outlets to within ten (10) feet of points indicated on plans without extra charge providing electrical trade is advised prior to installation.

12 CUTTING AND PATCHING

12.1 The Contractor is responsible for all cutting and patching required for the electrical installation. Structural members are not be cut without the consent of the structural engineer. 12.2 Where work by the electrical trade damages work of other trades, the electrical trade shall repair and make good such damage to the satisfaction of the trade concerned and the

13 ACCESS DOORS

Engineer.

- 13.1 Number of access doors to be kept to an absolute minimum and to be used only with the permission of the Engineer
- 13.2 Where access is required to pullboxes and junction boxes, these boxes are to be located in removable type ceiling areas where possible or adjacent to recessed luminaires. 13.3 Where it is absolutely impossible to service certain equipment through removable type ceilings or recessed luminaires and where special permission has been obtained from the Engineer, Division 26 to supply and install access doors required for servicing of such work. Access doors to be complete with necessary frames and hinged doors held closed with captive type studs. Access panels to be of not less than 14 gauge MDF, prime coated and painted on the job to match the wall or ceiling finish or as requested by the Architect.

14 PAINTING AND FINISHES

- 14.1 All electrical fittings, supports, hanger rods, pullboxes, channel frames, conduit racks, outlet boxes, brackets, clamps, etc., are to have galvanized finish or paint finish over corrosion-resistant primer.
- 14.2 All panelboards are to be factory finished with spray-on air dry enamel. All enamel shall be applied over corrosion resistant primer. Matte or flat type finish paint will not be accepted. All panels or similar factory finished units that are scratched or marked during installations are to be touched up with matching spray on dry lacquer and if required to provide satisfactory job are to be completely refinished.

15 SHOP DRAWINGS

- 15.1 Electrical trade is to submit to the Engineer for approval, shop drawings of electrical components as requested in relevant specification sections.
- 15.2 All drawings are to be submitted electronically in PDF format.
- 15.3 The Engineer's review of shop drawings is for general design only and does not relieve the electrical trade or suppliers from their responsibility for errors, proper fitting, construction of the work and furnishing of materials. The review is not to be construed as approving departures from the contract document requirements if such departures are not specifically noted in a covering letter accompanying such drawings. Electrical trade is responsible for verifying all dimensions.

16 RECORD PLANS

- 16.1 Maintain at site at least one set of drawings for recording "As-constructed" conditions. Electrical trade is to accurately record on this set of plans, day by day, all outlets, conduit, luminaires, equipment as actually installed on the job. Any changes to the contract work are to be similarly recorded.
- 16.2 As-built drawings shall be clearly marked in red including all changes to the original bid drawings covered by addenda, change orders, field changes, Job conditions, etc.
- 16.3 At completion of project, input changes to original project on CAD Drawings or within the Revit model and make one set of black-line drawings in version/release equal to contract drawings. Submit CAD Files or Revit Model and drawings upon substantial completion.

17 <u>TESTS</u>

- 17.1 All portions of the electrical work are to be tested and checked for satisfactory operation.
- 17.2 Before energizing any portion of the electrical system, perform megger tests on all feeders and branch circuits. Results of such tests shall conform to the requirements of the National Electrical Code and are to be to the satisfaction of the authorized inspection agency and the Engineer.
- 17.3 Upon completion of the work and immediately prior to final inspection and takeover, check the load balance on all feeders and at distribution center, panels, etc. Turning on all possible loads in the tenant and checking load current balance shall carry out the tests. If load unbalance exceeds 15 per cent, reconnect circuits to balance the load.

18 GUARANTEE/WARRANTY

- 18.1 That all work executed under this contract will be free from defects of material and workmanship for a period of one (1) year from the date of final acceptance of this work, unless noted otherwise.
- 18.2 The above parties further agree to, at their own expense, repair and replace all such defective work and other work damaged thereby which fails or becomes defective during the term of the warranty provided that such failure is not due to improper usage
- 18.3 The period of the warranty specified shall in no way supplant any other guarantee of a longer period but shall be binding on work not otherwise covered.
- 18.4 All Category 6 data cables and connectors will carry a 25-year manufacturer's warranty for bandwidth to 2.4G/bs.

19 BUILDING WIRING

- 19.1 All wiring shall be copper with THHN/THWN-2 insulation in rigid galvanized steel conduit or electrical metallic tubing. No wire smaller than No. 12 AWG gauge is to be used for branch circuit wiring. MC cable may be used only as follows: .1 Above removable ceilings from EMT junction boxes down to new duplex receptacles mounted in existing drywall partitions. In this case, the EMT junction box must be
- mounted on the slab immediately above the partition wall.
- .2 Within new drywall partitions to interconnect electrical devices, except that the connection from the junction box above the suspended ceiling down to the first electrical device in the drywall shall be wire in EMT conduit or empty EMT conduit for low voltage devices.
- .3 With the above exceptions, all 120-volt branch circuit wiring must be installed in rigid conduit or EMT. MC cable shall be complete with anti-short bushings. Wiring shall be color coded to match existing installation. Rigid threaded galvanized steel conduit is to be used for stub-ups from concrete slabs and for exposed runs below seven (7) feet from the floor.
- 19.2 Conduit to be sized in accordance with the National Electrical Code.
- 19.3 Where the floor slab is drilled for conduit installation to wall junction boxes or to floor fittings the floor shall be DRY CORE DRILLED. After conduit installation the opening shall be caulked and sealed. Conduit after installation of conductors shall be sealed with heavy density fiberglass, to maintain the integrity of the fire rating for the structure. Electrical trade to pay for all associated X-ray costs.

20 DEMOLITION

20.1 General

- .1 All unused conduit, wire, hangers, etc. is to be removed from the ceiling space. The intent is to keep the ceiling space clean.
- .2 The Contractor is to record as-built information showing luminaire type, junction boxes, conduit routes, and circuit numbers. The contractor shall provide as-built drawings to the Owner at the completion of the project
- .3 The Contractor is to turn over equipment being removed to building management. Equipment not required by building management is to be removed from site by the Contractor
- .4 The Contractor is to seal all unused openings due to electrical demolition to ensure that fire-resistance rating is maintained.
- .5 Provide decora blank coverplates at all unused outlets.

20.2 Lighting & Lighting Controls

- .1 Existing base building luminaires are to remain unless noted otherwise.
- .2 Luminaires to be removed as indicated on the drawings.
- .3 Switches on walls being demolished shall be removed.
- .4 Unused conduit and wire are to be removed.
- .5 Provide blank coverplates at all unused outlets.
- .6 Dimming stations associated with dimming system are to be removed. All conduit/wire to be removed in its entirety

20.3 Power

- .1 All circuits originating from panel boards located in electrical room which are not being re-used shall be pulled back to the source. Show information on as-built drawings. The electrical contractor is to inform the owner of any deficiency that is encountered during the demolition.
- .2 Power connections and outlets are to be removed from walls to be demolished.
- .3 All power associated with the existing Audio/Visual systems, including A/V racks & cabinets and panels & associated conduit/wire shall be removed back to the source in Electrical Room. Dimming Cabinets in the Electrical Riser Room shall also be removed.
- .4 All electrical devices affected by demolition not shown on existing walls and columns are to be removed.
- .5 Ensure that all existing receptacles left isolated by the removal of outlets in the same run shall be re-fed to become fully functional to the satisfaction of the engineer. 20.4 Communications

- .1 Conduits are to be removed back in their entirety.
- .2 All communication outlets with cabling, coverplates and connectors are to be removed where indicated.
- .3 Data cabling interconnecting floors that is supplemental to base building riser systems shall be removed.
- .4 Remove existing fiber and copper backbone between each floor and Floor Data Room.
- .5 Existing communications cabling and connectors not shown on existing walls and columns are to be removed. Communications outlets that are not being reused shall be blanked off with coverplates.

20.5 Systems

- .1 Fire alarm detection and alarm system are to remain operational during demolition.
- .2 Fire alarm devices located on walls being demolished are to be removed and neatly secured to nearest building structure
- .3 All security and miscellaneous systems not related to base building operations are to be removed and their conduit and wire removed back to the source.

21 WIRING DEVICES

- 21.1 Boxes, except where otherwise noted, shall be pressed sheet steel UL listed and galvanized to CSA standards. All outlets for flush wall mounting switches, receptacles, telephone and LV outlets shall be No. 52151 box with appropriate plaster cover for single, 2-gang outlets or 4-gang outlets. Flush mounting voice/data, data & telephone wall outlets shall be No 52171 series (4 inch square, 2^{1/8} inches deep with appropriate plaster or extension ring.
- 21.2 Sectional type boxes or handy boxes shall not be used.

21.3 Receptacles on levels shall be white decora, or match existing. Where called for on the drawings, receptacles shall be orange faced indicating isolated ground receptacles Receptacle mounting height to be at 18 inches. Special receptacles will be as shown on the drawings. Receptacles to be of specification grade and of one manufacturer throughout; e.g., Leviton.

21.4 Typical wall outlets comprising of more than two duplex receptacles or light switches shall have a common gang faceplate.

- 21.5 Occupancy lighting motion sensors shall be as manufactured by Wattstopper. Occupancy sensors shall be complete with power packs.
- 21.6 Plates for all flush mounting devices shall be white decora.
- 21.7 All isolated ground circuits to have separate neutral conductor per phase.
- 21.8 For non-isolated ground computer receptacles, provide separate neutral conductor per phase
- 21.9 Kroy duratape 200 nametags to be provide on all existing and new receptacles indicating circuits and panel designation, e.g. B32. At all locations, dedicated circuits such as printers, faxes, plotters, copiers, etc. indicated on coverplate receptacle designation, i.e. computer, fax, printer, etc.

23 SUPPORTING DEVICES

- 23.1 Conduit supports: Single runs to be galvanized conduit straps or ring bolt range 1 type hangers; multiple runs (three or more) conduit rack; vertical runs channel support with conduit fittings.
- 23.2 Install to maintain headroom, neat mechanical appearance and to support equipment loads required. Where inserts are required in concrete, expansion inserts, lead inserts or plastic inserts may be used in drilled holes. Wood or fiber plugs not permitted.
- 23.3 All electrical distribution including cable tray and conduit, which is mounted above the suspended ceiling, shall be supported directly and independently from the concrete slab. 23.4 The use of any part of the ceiling or ceiling suspension system as a support or foundation for the suspension of cable tray, conduit or flexible conduit (where permitted) is
- 23.5 The use of any drywall or wall partition as a support or foundation for cable tray or conduit routed horizontally through the ceiling space is forbidden.
- 23.6 Support hangers and other trades to support non-electrical services or devices shall not use trays installed by the electrical trade.

24 PULLBOXES

24.1 Supply and install pullboxes as shown on the drawings and as required suiting job conditions. Pullboxes shall conform to National Electrical Code requirements and shall be finished in enamel over corrosion-resistant primer with screw-on or hinged cover. In removable ceiling areas, pullboxes are to be installed above the ceiling. Pullboxes in finished walls and plaster or non-removable ceilings shall have overlapping type trip with covers prime coated and painted on job to match wall or ceiling finish.

24.2 Surface mounted pullboxes or pullboxes above ceiling shall be finished in colors matching existing building.

25 <u>GROUNDING</u>

- 25.1 Supply and install a complete grounding system. The grounding/earthing system must meet the following criteria:
- .1 Local electrical codes must be adhered to.
- .2 The grounding/earthing system shall comply with J-STD-607-A and ANSI/TIA-942.
- .3 All grounding/earthing conductors shall be copper.
- .4 Lugs, HTAP's, grounding strips shall be made of tin plated electrolytic copper. Antioxidant shall be used while making connections in the field.
- .5 Wherever possible, two hole lugs shall be used. All lugs shall be irreversible compression and meet NEBS level 3. Lugs with inspection windows shall be used in all noncorrosive environments.
- .6 Die index numbers shall be embossed on all compression connections to allow for inspection.
- .7 Cable assemblies shall be UL listed and CSA certified. Cables shall be distinctive green or green/yellow in colour and all jackets shall be UL, VW-1 flame rated.

25.2 The Telecommunications Grounding Busbar (TGB) in the telecommunications space will be grounded/earthed to the Telecommunications Main Grounding Busbar (TMGB) located at service entrance via the telecommunications grounding riser in electrical room. The gauge of the connecting ground/earth cable, known as the Telecommunications Bonding Backbone (TBB) will follow J-STD-607-A guidelines as indicated on drawings.

- 25.3 Any metallic component in the same space as the TGB including racks, ladders, enclosures, equipment, surge protective devices, cable tray, TBB's, other TGB's, electrical power panels for telecommunications equipment and the Grounding Equalizer if present. Equipment and rack shall be bonded in accordance with the methods described in ANS/TIA-942.
- 25.4 Route TBB to each TGB in as straight a path as possible. The TBB should be installed as a continuous conductor avoiding splices where possible. Plumbing and conduit shall not be used as TBB.

26 FIRE ALARM SYSTEM

- 26.1 Electrical trade is to extend existing closed circuit supervised annunciated fire alarm systems into tenant premises as indicated on drawings and specified herein. All new equipment and components shall match existing base building equipment and shall be by same manufacturer.
- 26.2 Connect new fire alarm system devices to the existing building fire alarm system per landlord and AHJ requirements. Expand/modify/reprogram existing fire alarm system as required to accommodate the new devices indicated. This is a performance based specification: Items shown are a minimum. Provide additional devices as required to adhere to all code requirements. Acceptable manufacturers: Match existing system manufacturer.
- 26.3 Actual fire alarm design is to be by a company licensed to design/install fire alarm systems in the State of Oregon. Fire Alarm submittals are to be submitted to AHJ for review and approval. Coordinate with facility personnel for possible specific fire alarm groups that should accommodate the fire alarm system updates: Obtain contact information from owner's representative and provide for all items accordingly.
- 26.4 All fire alarm strobes are to be minimum 110 candela and mounted 80" above finished floor
- 26.5 Color code fire alarm system wiring and install in conduit. Install all wiring and products per manufacturer's requirements.
- 26.6 Make conduit and wiring connections to duct mounted smoke detectors.
- 26.7 Test completed fire alarm system in accordance with NFPA and the local AHJ.
- 26.8 All smoke detectors are to feed through fire alarm control unit, including smoke detectors installed in main supply air duct of each A/C unit. See mechanical drawings for duct detector locations.

26.9 All smoke detectors are to be minimum 36" away from HVAC supply diffusers or return air grilles.

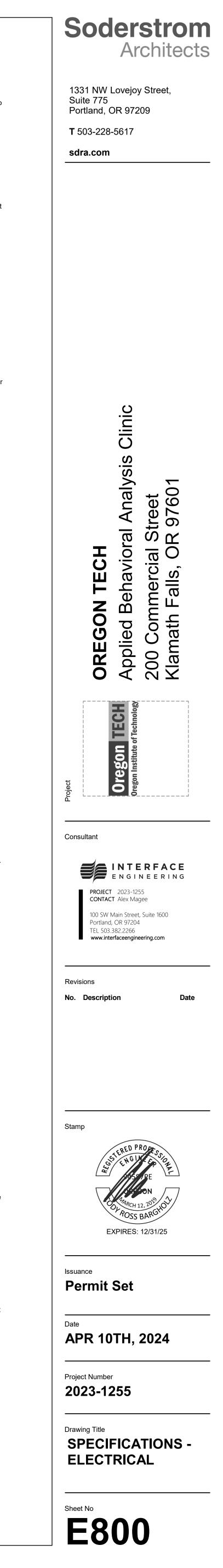
26.10 Fire alarm system is to provide direct notification to the fire department.

27 LIGHTING CONTROL SYSTEM

- 27.1 Occupancy/Vacancy sensor layout on Drawings are designed based on Lutron; Approved manufacturers listed are allowed on condition of meeting the specified conditions including complete sensor coverage of the area controlled and switching of luminaires in the area controlled. Provide additional sensors and power switch packs as needed to provide the same level of functionality as shown on Drawings or required in Specifications. Remove and replace electrical equipment installed not meeting these conditions at no cost to Owner.
- 27.2 Occupancy sensor designation indicates sensors automatically turn lights ON when the sensor detects the presence of a person and will automatically turn lights OFF when no presence is detected for a specified amount of time (automatic-on and automatic-off).
- 27.3 Vacancy sensor designation requires someone to manually turn the lights ON. The sensor will then automatically turn the lights OFF when no presence is detected for a specified amount of time (manual-on and automatic-off).
- 27.4 Ceiling-Mounted Sensor: Programmable to operate as an occupancy sensor (automatic-on and automatic-off) or a vacancy sensor (manual-on and automatic-off). 360 degree sensor range; coverage: 1200 SF, unless otherwise noted on drawings. Multiple sensors can be wired in parallel to allow coverage of large areas.
- 27.5 Combination occupancy/vacancy wall switches ("Sensor switches"): Completely self-contained sensor system that fits into standard single gang box. Passive infrared sensor technology includes advanced signal processing to reduce false triggers without increasing sensitivity. LED indicator blinks when occupant sensed. Includes neutral wire to meet NEC. Finish is to be white.
- 28 POWER DISTRIBUTION
- 28.1 Provide new equipment as indicated on the drawings. Branch circuit breakers and wiring to be installed under this contract. Provide typewritten directory of panel loads and affix to panelboard doors
- 28.2 Panelboards shall be composed of the number of circuit breakers with poles and trip ratings as listed in the schedules. Where space only is called for, provide all mounting brackets, busbar drillings, fillerplates, etc., to facilitate installation of future breakers.
- 28.3 New panelboards shall be of 225 amps, three phase, four wire solid neutral design composed of an assembly of bolt-in-place type molded case automatic air circuit breakers with both thermal and magnetic trip and trip free action. Each breaker shall be identified as to function and load controlled.
- 28.4 Panelboards shall be of corrosion-resistant finish having trim for flush or surface mounting as indicated in the schedules. Panelboard trim shall have a hinged locking door with flush type catch and lock over circuit breakers. All panelboards shall be of matching type to existing project.

28.5 Where called for provide an isolated stand-off ground bus on new or existing panelboards and connect back to the building ground with insulated #2 AWG.

- 28.6 Panel schedules shall be retyped to reflect existing and new circuits.
- 28.7 Panelboards to be subfed or double lugged as indicated. Provide double lug kits in existing and new panelboards as required. New panelboards feeding IG circuits shall be complete with IG bar. Where existing panelboards are being replaced with new, contractor shall relocate existing branch circuits to new panelboard and provide new breakers for existing and new circuits
- 28.8 Label all equipment with lamacoid labels. Labels indicate equipment designations and voltage. Report to the engineer prior to installation.
- 28.9 Work requiring shutdown of power bus duct shall be coordinated with landlord and shall be carried out beyond normal working hours.
- 28.10 Allow for relocation of any equipment in electrical room which are necessary to allow for proper installation of new and relocated equipment.
- 28.11 Calculate arc flash incident energy (AIE) levels and flash protection boundary distances to determine required level of personal protective equipment (PPE) at applicable electrical equipment during normal conditions that could result in maximum arc flash incident energy levels. Calculations are to be stamped by a currently licensed electrical engineer registered in the State of the project scope. Provide label compliant with NFPA 70E guidelines indicating personal protective equipment (PPE) recommended for servicing of electrical equipment while energized, as well as calculated incident energy levels and arc flash protective boundary distance.
- 29 LUMINAIRES
- 29.1 Original installation of building standard 2/F32 watt T8 indirect basket type fluorescent luminaires does not form part of this contract.
- 29.2 However, supply and installation of low voltage switching equipment and wiring, over and above what presently exists, will be the responsibility of this contractor.
- 29.3 Luminaires shall be added, relocated or removed as indicated. Luminaires removed shall be turned over to the building owners.
- 29.4 Electrical trade shall be responsible for cleaning and replacing any and all damaged lens, faulty ballasts and provide touch-up paint where required. Replace burnt out lamps for fluorescent and incandescent luminaires where required.
- 29.5 All luminaires to be supplied complete with lamps. Incandescent lamps to be 5000 hours, 130 volt extended service type. Unless otherwise noted, all fluorescent lamps shall be standard warm white T8. Special lamps to be used where indicated with the longest life available in each category. Lamps shall be as manufactured by Phillips, Osram or Svlvania.
- 29.6 Light Emitting Diodes (LED's)
- .1 All LED products must be tested and certified using the latest IES Standards LM-79 and LM-80, as well as ANSI Standards C62.41.1 and C62.41.2
- .2 Correlated Color Temperatures to conform to latest ANSI NEMA ANSLG C78.377.
- .3 Color Rendering Index to be greater than 80 CRI
- 30 COMMUNICATION CABLING RACEWAY SYSTEM
- 30.1 Supply and install conduit, junction and outlet boxes to form a complete empty raceway system as described here and indicated on the drawings. All empty conduits will be complete with pullwire.
- 30.2 At each communications data, telephone or combination data/telephone outlet provide a 4" x 4" square box with plaster ring for single gang faceplate and associated communications connectors. Stub up a conduit from each outlet box into the above ceiling space to a height of 6" above the ceiling; provide a nylon grommet in each conduit to prevent cable damage.
- 30.3 Provide new cable tray as indicated on the drawings. Cable tray shall be Cablofil's continuous, rigid, welded steel wire mesh cable management system complete with patented safety edge T-welded wire lip. Cable tray shall be 12" wide and 4" deep. All T-bends and 90° to be installed using Cablofil EZ T90 kit. Cable exists (Cablofil part number CABEXIT) to be used where necessary. Splicing is to be accomplished using either Cablofil's nut/bolt/clamp assembly (part number EDRN). Install cable management system using hardware, splice connectors, support components, and accessories furnished by Cablofil and in accordance with the manufacturer's instructions including load span criteria. (See HYPERLINK "http://www.cablofil.com"<u>www.cablofil.com</u> for further details regarding load span criteria). Basket tray shall have a divider dividing basket 2/3 to 1/3 ratio. Cable tray drywall ceilings shall be enclosed type.
- 30.4 All non-plenum rated cable tray above the suspended ceiling raceways shall be routed parallel or perpendicular to the structure of the building and shall be supported from the concrete slab.
- 30.5 Plenum rated FT6/CMP cables may be routed exposed above the suspended ceiling in the return air plenum. Plenum rated cables shall be stamped FT6/CMP along the length of the cable jacket. Cables not carrying this designation must be routed in enclosed raceways. Cables must be supported independently from the structural slab.
- 30.6 The installation of exposed cable shall be managed to provide a neat installation. Where a number of cables are routed together, they shall be loaded in the perforated cable tray along the main trunk route, normally above the corridor ceiling, with off takes tied to ceiling stringers and not laid directly on the tiles. Cable will drop down into conduit stubups in the drywall and down to wall outlets. Supports from the existing ceiling grid, mechanical duct or sprinkler piping and associated support systems are not permitted.
- 30.7 Riser cables must be terminated only on assigned blocks as approved by the telecommunications consultant. Jumpers and wiring must run in "D" rings or equivalent and neatly secured. Cables shall be tagged with cross-reference to the as-built documentation. Cable pairs used must be recorded in the building Master Log Book and permanently tagged at each end. Perform all work in a neat and workmanlike manner following lines, in consideration of industry standards.
- 30.8 Permission must be obtained from the building manager to reuse existing riser cables and termination hardware. All reused components must be permanently tagged. Permission must be obtained from the building manager to use existing riser sleeves or slots. Permission must be obtained from the building manager for additional riser holes or sleeves. Core drilled holes will also require slab x-rays and approval of the structural engineer.
- 30.9 All riser sleeves and holes must be filled with UL or CSA approved fire stopping. All existing fire stopping that has been cut or removed must be replaced in an approved manner to restore original rating. Where new cables are run loose (i.e. not in conduit) they must be independently supported at maximum every 5' horizontally and three equally spaced times on every floor for vertical riser. All cables must be securely fastened to the plywood backboards to existing or new Unistrut or similar supports. All new cables must be FT6/CMP rated or as otherwise specifically approved by the telecommunications consultant. Installations must comply with the National Electrical Code and the building electrical standards.
- 30.10 All pull strings/cords must be replaced if distribution conduits/pathways are used by the contractors.
- 30.11 Cables and conduits must be labelled on both ends for every run and on every floor with the tenant's name and the floors of origin and termination (e.g. "ABC Oil 4 o 24"). Labels must be mechanically imprinted wraparound style. Cables that are installed in raceways or conduit provided by the building manager are to be labelled every 5m and in every junction box.
- 30.12 Conduit and cable must be installed in a neat and workable manner so as not to interfere with existing installation or to make them inaccessible. Follow building lines and comply with industry standards.
- 30.13 The installation of exposed cables shall be managed to provide a neat installation and shall be run parallel to building lines. Exposed cable in return air plenum will be attached to the ceiling every 3 feet by J-hooks and where more than one cable existing will be tie wrapped neatly. Cables are to be independently supported from the slab. Support from the sprinkler pipes, conduit, T-bar, mechanical ducts, etc. is not acceptable.
- 30.10 Server Room ###
- .1 3/4", 8ft high, full width of the longer wall, sheets of plywood, backboard. The plywood shall be treated with two (2) coats of non-conductive, fire resistance paint to match wall paint. Supply and install backboards as indicated on the plans. Install plywood in server room only.
- 31.1 EXIT LIGHTS
- 31.2 Standard profile, stencil style with ADA/TAS direction arrows, matte oyster finish with letters with red plastic backing, complete with 1.5 watt LED and 90 minute minimum battery. Exit luminaires to match existing. Exit luminaires to be single face or twin face with universal mounting. 32 MECHANICAL EQUIPMENT WIRING
- 32.1 Electrical trade to provide all connections, starters, disconnect, etc., required for mechanical equipment. All low voltage controls and control wiring will be the responsibility of the mechanical trade and/or his control subtrade. Electrical trade shall confirm with the mechanical trade, the size, characteristics, and locations of all mechanical equipment before installation of conduits, outlets, heaters, etc.
- 32.2 The magnetic starters will be complete with control transformer, HOA switch, pilot light and required number of auxiliary N.O. and N.C. contacts required to perform control function. Control wiring from magnetic starters to various pieces of control equipment, interlocking, etc. shall be the responsibility of the controls contractor.
- 33 BASE BUILDING SPECIFICATIONS
- 33.1 All work must be performed to the base building specifications. Specifications on the base building for Tenant are available from building management for information and use. 34 ENGINEER'S INSPECTIONS
- 34.1 An inspection will be carried out by the engineer prior to the replacement or installation of suspended ceiling tiles. The electrical contractor shall advise the engineer when all work has been completed above the suspended ceiling. Failure to notify the engineer in time will necessitate the removal of all ceiling tiles for inspection purposes. Allow at least 24 hours notice of the installation of ceiling tiles.



PLUMBIN	IG SYME	SOL LIST

	a standard symbol list and not all items listed may be used.		
breviat	ions	<u>General</u>	
(A)			
AFF AP	ABOVE FINISHED FLOOR ACCESS PANEL	$\langle \mathbf{x} \rangle$	KEYED NOTE
&	AND		
A @	AQUASTAT, ARCHITECT, ANCHOR, AMPHERE AT	—×—×—	DEMOLISH
BFP	BACKFLOW PREVENTER		
BFF BTUH	BELOW FINISHED FLOOR BRITISH THERMAL UNITS PER HOUR		EXISTING WORK
BLDG	BUILDING		
CV			NEW WORK
CO CW	CLEANOUT COLD WATER		
CD	CONDENSATE DRAIN	<i></i>	PIPE OR CONDUIT BELOW GRADE
CONT. CFH	CONTINUATION CUBIC FEET PER HOUR		
CFR	CUBIC FEET PER NOUR CUBIC FEET PER SECOND	,	CONTINUATION
(X)	DEMOLISH		CONTINUATION
DW DET	DISHWASHER, DOMESTIC WATER DOMESTIC EXPANSION TANK		
DCVA	DOUBLE CHECK VALVE ASSEMBLY	\bullet	EXTENT OF DEMOLITION
DN DS	DOWN DOWNSPOUT		
DSN	DOWNSPOUT NOZZLE	$igodoldsymbol{\Theta}$	POINT OF CONNECTION
D	DRAIN		
DFU DWV	DRAINAGE FIXTURE UNIT DRAINAGE, WASTE AND VENT	X	FIXTURE TAG (LEVEL BELOW FIXTURE)
DF	DRINKING FOUNTAIN		
EWC	ELECTRIC WATER COOLER	XXX-X	HVAC EQUIPMENT IDENTIFICATION (REF. ONL
EWH (E)	ELECTRIC WATER HEATER EXISTING	~~~~~	
FT	FEET	$\langle xx-x \rangle$	
FFE			PLUMBING EQUIPMENT IDENTIFICATION
F FL	FIRE, FAHRENHEIT FLOOR	Piping Fitting	IS
FCO	FLOOR CLEANOUT		
FD FV	FLOOR DRAIN FLUSH VALVE		ACCESS PANEL
· ·	FOOT, FEET		
(F)		只	AQUASTAT
GPM GWH	GALLONS PER MINUTE GAS WATER HEATER	i	
HVAC	HEATING, VENTILATING AND AIR CONDITIONING		BLIND FLANGE
HZ	HERTZ HOSE BIBB		
HB HW	HOSE BIBB		
HWFU	HOT WATER FIXTURE UNIT		САР
HWR IN, "	HOT WATER RETURN INCHES		
IW	INDIRECT WASTE	Ф <u>сот</u>	CLEANOUT TO GRADE
INV			
L MIN	LAVATORY MINIMUM	\longrightarrow	CONCENTRIC REDUCER
MX	MIXING VALVE		
MS (N)	MOP SINK NEW	<u>DSN</u>	DOWNSPOUT NOZZLE
N	NORTH	7	
		2	ECCENTRIC REDUCER
NTS #	NOT TO SCALE NUMBER		
NO.	NUMBER	•	
OD OFCI	OVERFLOW DRAIN, OUTSIDE DIAMETER OWNER FURNISHED, CONTRACTOR INSTALLED	—— ^Ф <u>FCO</u>	FLOOR CLEANOUT
OFOI	OWNER FURNISHED, OWNER INSTALLED		
PLBG	PLUMBING	FD	FLOOR DRAIN
P POC	PLUMBING, PUMP POINT OF CONNECTION		
PSI	POUNDS PER SQUARE INCH	× FS	FLOOR SINK
PD	PRESSURE DROP, PLUMBING DEMOLITION, PUMPED DISCHARGE		
PRV QTY	PRESSURE REDUCING VALVE QUANTITY	-	FLOW DIRECTION
RWL	RAINWATER LEADER		I LOW DIRECTION
RPBP	REDUCED PRESSURE BACKFLOW PREVENTER		
(R) RD	RELOCATE / RELOCATED LOCATION ROOF DRAIN	 +	HOSE BIBB / WALL HYDRANT
SAN	SANITARY		
SB SHT	SERVICE BOX SHEET		OVERFLOW ROOF DRAIN
SA	SHOCK ARRESTOR	<u> </u>	
SOV	SHUT OFF VALVE	`	PIPE DROP
S, SK SF	SINK SQUARE FEET		
SD	STORM DRAIN		
SP	SUMP PUMP, STATIC PRESSURE	o	PIPE RISE
TEMP TP	TEMPERATURE TRAP PRIMER, TOTAL PRESSURE	~	
TYP	TYPICAL	$-\!$	PUMP
U, UR			
V VTR	VACUUM, VENT, VOLT VENT THRU ROOF	© RD	ROOF DRAIN
WCO	WALL CLEANOUT	\smile	
W	WASTE	୍ୱ	SHOCK ABSORBER / WATER HAMMER ARRES
WC WHA	WATER COLUMN, WATER CLOSET WATER HAMMER ARRESTOR	Ť	
WHA	WATER HEATER, WALL HYDRANT		
			STRAINER
WSFU	WITH	k	
WSFU W/			
		₽1	T&P RELIEF VALVE WITH PIPE TO DRAIN
			T&P RELIEF VALVE WITH PIPE TO DRAIN
		≎	T&P RELIEF VALVE WITH PIPE TO DRAIN TEE DOWN ON PIPE
		≎	

ک VTR

______ WCO WALL CLEANOUT

VENT THROUGH ROOF

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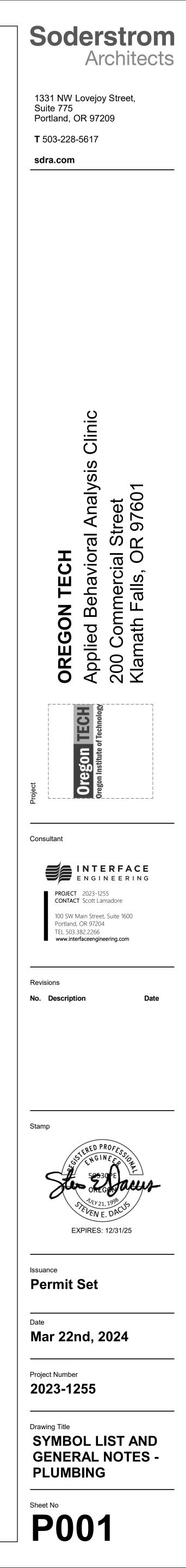
Piping System	<u>ns</u>
	COLD WATER PIPING
D	CONDENSATE / INDIRECT DRAIN PIPING
	HOT WATER PIPING
	HOT WATER RETURN PIPING
2#G	NATURAL GAS PIPING, 2 LB
G	NATURAL GAS PIPING, 7" WC PRESSURE
OD	OVERFLOW DRAIN PIPING ABOVE GRADE OR FINISHED FLOOR
	SANITARY VENT PIPING
	SANITARY WASTE OR SOIL PIPING ABOVE GRADE OR FINISHED FLOOR
	SANITARY WASTE OR SOIL PIPING BELOW GRADE OR FINISHED FLOOR
SD	STORM DRAIN PIPING ABOVE GRADE OR FINISHED FLOOR
— — SD — —	STORM DRAIN PIPING BELOW GRADE OR FINISHED FLOOR
TP	TRAP PRIMER PIPING
<u>Valves</u>	
BFP	BACKFLOW PREVENTER
—-ī	CHECK VALVE

SHUTOFF VALVE, GENERAL

GENERAL PLUMBING NOTES

- A. CONDITIONS SHOW ON THE PLANS RELATIVE TO THE WORK TO BE PERFORMED ARE BASED ON THE BEST INFORMATION AVAILABLE BUT ARE SUBJECT TO VERIFICATION. VERIFY LOCATIONS AND ELEVATIONS OF UTILITIES TO BE CROSSED OR CONNECTED. CORRECT DEFICIENCIES CAUSED BY FAILURE TO PERFORM SUCH VERIFICATIONS AT NO EXPENSE TO OWNER. IMMEDIATELY NOTIFY ARCHITECT AND ENGINEER OF CONDITION IN CONFLICT WITH THE DETAILS/PLANS.
- B. PROVIDE GAS SHUTOFF VALVES, PRESSURE REGULATORS AND UNION AT CONNECTIONS TO GAS-FIRED EQUIPMENT. PROVIDE REGULATOR RELIEF VENT PIPING TO ATMOSPHERE WHERE REQUIRED BY CODE. C. COORDINATE INSTALLATION OF PIPING BELOW AND ABOVE GRADE WITH
- STRUCTURAL COMPONENTS AND OTHER SYSTEMS INSTALLATION.
- D. COORDINATE FIXTURES, EQUIPMENT, PIPE ROUGH-IN/CONNECTION LOCATIONS AND DRAIN LOCATIONS WITH ARCHITECTURAL DRAWINGS. E. PROVIDE CLEANOUTS FOR SANITARY WASTE AND STORM DRAINAGE SYSTEMS WHERE SHOWN AND AS OTHERWISE REQUIRED BY CODE.
- F. FURNISH AND INSTALL VALVES, TRAPS, STRAINERS, BACK FLOW PREVENTER, ETC. NOT FURNISHED BY EQUIPMENT SUPPLIER, BUT REQUIRED FOR PROPER EQUIPMENT OPERATION.
- G. SHUT-OFF VALVES TO BE INSTALLED IN ALL WATER AND GAS PIPING AT LOCATIONS SHOWN. PROVIDE ACCESS PANELS IF CEILING AND STRUCTURAL CONDITIONS DO NOT ALLOW NORMAL ACCESS. COORDINATE EXACT TYPE AND LOCATION WITH OWNER AND GENERAL CONTRACTOR PRIOR TO ROUGH-IN.
- H. CONTRACTOR TO PROVIDE LOCATE/SCOPING SERVICES FOR EXISTING PIPING BELOW GRADE AND DOCUMENT/RECORD, COORDINATE WITH NEW WORK PRIOR TO START OF CONSTRUCTION.
- I. SEE PLUMBING FIXTURE SCHEDULE FOR PIPE CONNECTION SIZES. J. COORDINATE INSTALLATION OF DUCTWORK, PIPING, FIXTURES, EQUIPMENT, ETC.WITH ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL AND FIRE PROTECTION SYSTEMS PRIOR TO INSTALLATION.
- K. REFER TO ARCHITECTURAL DRAWINGS FOR ADA ACCESSIBILITY REQUIREMENTS.
- L. PROVIDE CEILING ACCESS PANELS FOR VALVES LOCATED ABOVE INACCESSIBLE CEILING SYSTEMS. VALVES INSTALLED ABOVE CEILING SHALL BE WITHIN 18" OF CEILING. MAINTAIN FIRE RATINGS WHERE REQUIRED. M. SEE ARCHITECTURAL DRAWINGS FOR EXACT FIXTURE LOCATIONS.
- N. REFER TO SPECIFICATIONS FOR SEISMIC RESTRAINT REQUIREMENTS FOR PIPING/EQUIPMENT.

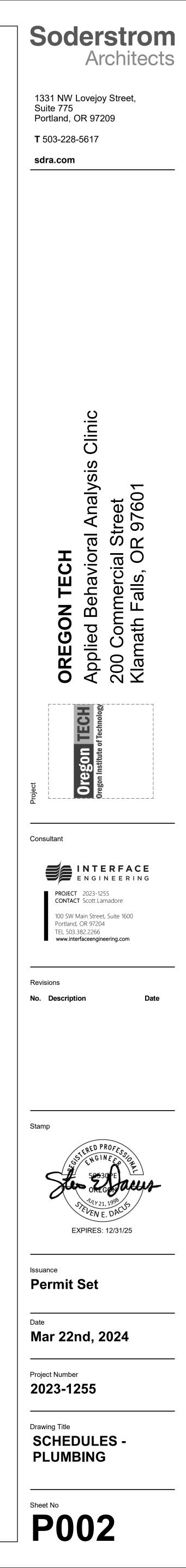


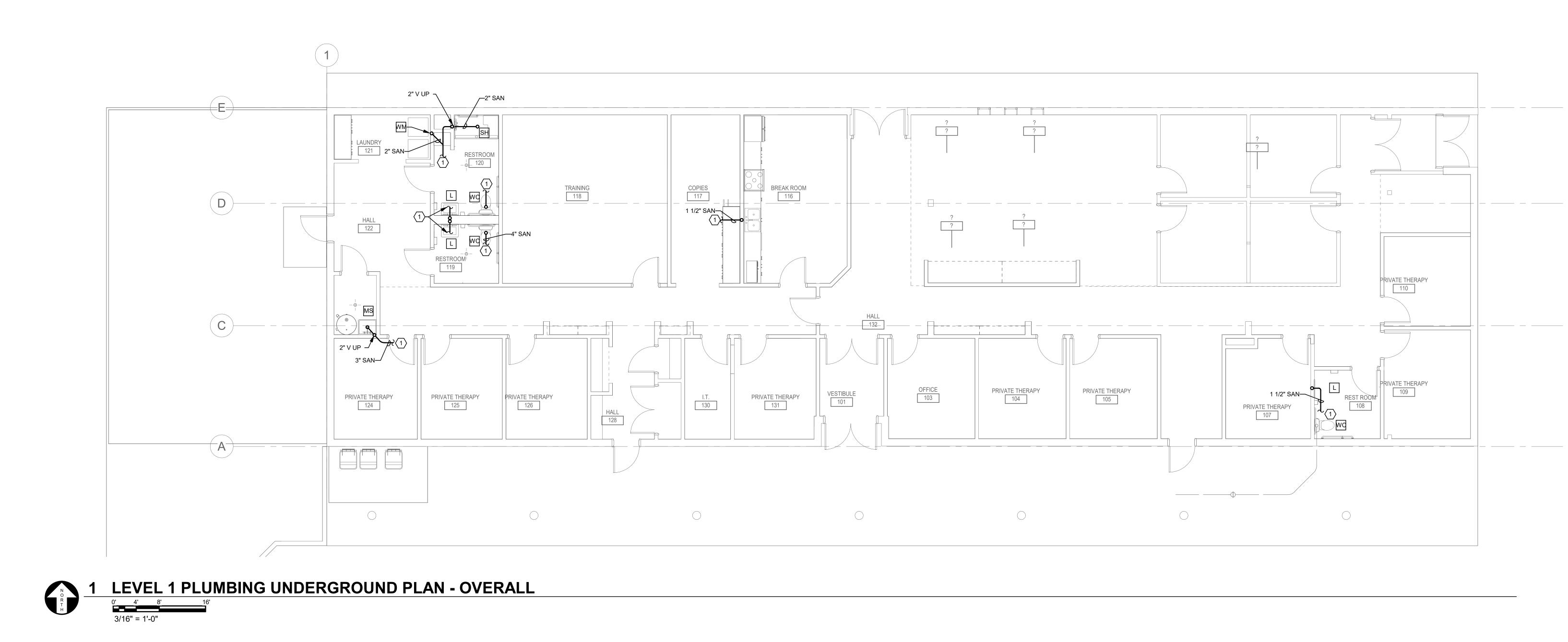


			BASIS OI	- DESIGN			CON	NECTION			
SYMBOL	FIXTURE TYPE	DESCRIPTION	MFR	MODEL	ACCESSORIES	W	V	CW	HW	ELECTRICAL	COMMENTS
L-1	LAVATORY	WALL HUNG, ADA COMPLIANT, VITREOUS CHINA, SINGLE-HOLE PUNCH, FRONT OVERFLOW	AMERICAN STANDARD	0356.421	DECK MOUNTED, TOUCH-FREE, SENSOR OPERATED FAUCET, HARD WIRED, SINGLE HOLE, SINGLE-SUPPLY, 0.50 GPM; CHICAGO FAUCETS MODEL 116.706.AB.1; HARD-WIRE, MULTI-USE, CLASS 2 TRANSFORMER FOR UP TO 8 FAUCETS; CHICAGO FAUCETS MODEL 243.259.00.1; ASSE 1070 COMPLIANT MIXING VALVE, INTEGRAL CHECK VALVES, WATTS MODEL LFMMV (SET DISCHARGE TEMPERATURE AT 110 DEG. F.)	1-1/2"	1-1/2"	1/2"	1/2"		MOUNT LAVATORY AT ADA COMPLIANT HEIGHT, SEE ARCHITECTURAL PLANS FOR HEIGHT AND LOCATION. SEE SPECIFICATION SECTION 224000 FOR FLOOR MOUNTED CARRIER TRAP COVERS, SUPPLY STOPS AND ADDITIONAL ACCESSORIES. COORDINATE INSTALLATION AND POWER REQUIREMENTS WITH DIVISION 26.
MS-1	MOP SINK	FLOOR MOUNTED, ONE PIECE MOLDED STRUCTURAL FIBERGLASS, 24-INCHES X 24-INCHES X 10-INCHES	MUSTEE	63M	WALL HUNG, MOP SINK FAUCET, 8-INCH CENTERS, LEVER HANDLES, PAIL HOOK, CHROME PLATED, ATMOSPHERIC VACUUM BREAKER, 3/4" THREADED HOSE OUTLET AND WALL FLANGE; CHICAGO FAUCETS MODEL 540-LD897SWXFABCP; 3/8" OFFSET INLET SUPPLY ARM WITH INTEGRAL CHECK; CHICAGO FAUCETS MODEL GCJKABCP; VINYL BUMPER GUARDS; MUSTEE MODEL 63.401	3"	2"	1/2"	1/2"		
S-1	SINK	DROP-IN, DOUBLE BOWL, 18 GAUGE STAINLESS STEEL, 33-INCHES X 21-INCHES X 6-1/2-INCHES DEEP, 36-INCH MINIMUM CABINET SIZE, 3-HOLE PUNCH, BARRIER FREE	ELKAY	LRAD332165	DECK MOUNTED FAUCET, 8-INCH RIGID/SWING GOOSENECK, 4" WRISTBLADE HANDLES, 8-INCH FIXED CENTERS, 1.5 GPM AERATED FLOW RATE; CHICAGO FAUCETS MODEL 201-AGN8AE35-317AB	2"	1-1/2"	1/2"	1/2"		SEE SPECIFICATION SECTION 224000 FOR SUPPLY STOPS AND ADDITIONAL ACCESSORIES.
SH-1	SHOWER	BARRIER FREE, ONE PIECE, 60-INCHES X 30-INCHES X 77-1/2-INCHES INSIDE DIMENSIONS, SLIP RESISTANT TEXTURED BOTTOM, HORIZONTAL BACK AND SIDE WALL GRAB BARS, VERTICAL SIDE WALL GRAB BAR, FOLD UP SEAT, STEEL CURTAIN ROD, 3/4-INCH THRESHOLD	COMFORT DESIGNS	SSS 6233BF-F .75 L-BAR	SINGLE HANDLE PRESSURE BALANCING SHOWER VALVE, SERVICE/CHECK STOPS, 1.5 GPM HANDHELD SHOWER HEAD FLOW RATE, 60-INCH FLEXIBLE METAL HOSE, 24-INCH MOUNTING BAR, VACUUM BREAKER; ZURN MODEL Z7300-SS-HW-MT-H9	2"	1-1/2"	1/2"	1/2"		HANDING BASED ON SEAT LOCATION, COORDINATE WITH ARCHITECT PRIOR TO PROCUREMENT. PROVIDE WITH OPTIONS AS LISTED IN DESCRIPTION.
WC-1	WATER CLOSET	FLOOR MOUNTED, FLOOR OUTLET, GRAVITY TANK TYPE, VITREOUS CHINA, ADA HEIGHT, ELONGATED, 1.28 GPF, 12" ROUGH-IN	SLOAN	WETS-4029.40 10) SEAT - ELONGATED, PLASTIC, SELF-SUSTAINING CHECK HINGES WITH NON-CORRODING STAINLESS STEEL POSTS; BEMIS MODEL 1955SSCT	3"	2"	1/2"			SEE ARCHITECTURAL PLANS FOI LOCATION. SEE SPECIFICATION SECTION 224000 FOR ADDITIONA ACCESSORIES.
WM-1	OUTLET BOX	WASHING MACHINE OUTLET BOX (NON-FIRE RATED) - NSF-372 COMPLIANT, ABS BOX/FRAME, NO-LEAD BRASS VALVES, ASSE 1010 WATER HAMMER ARRESTORS, 3/4" OUTLET CONNECTIONS, 2" DRAIN CONNECTION, INDIVIDUAL DRAIN AND SUPPLY BOXES	SIOUX CHIEF	696G2313		2"	1-1/2"	1/2"	1/2"		SUPPLY CONNECTION TYPE PER PIPING MATERIAL. STANDARD PACK (SUPPLY BOX, FRAME, BRACKET & DEBRI COVER). INSTALL WITH BOTTOM OF BOX A 34" A.F.F. UNLESS NOTED OTHERWISE.

GAS WATER HEATER SCHEDULE - TANK TYPE													
			BASIS OF DESIGN		GAS		CAPACITY		ELECTRICAL				
SYMBOL	EQUIPMENT TYPE	LOCATION/ SERVING	MFR	MODEL	TYPE	INPUT (BTU/H)	TANK CAPACITY(G ALLONS)	RECOVERY RATE @ 100°F RISE (GPH)	VOLTS	PH	AMPS	MAX WT (LBS)	NOTES
(E)GWH-1	NATURAL GAS FIRED, DIRECT VENTED, CONDENSING, HIGH EFFICIENCY - TANK TYPE	JANITOR 123	AO SMITH	GDVH	TANK	55000	60	0	120	1		490	

FIXTURE UNIT CALCULATIONS - UPC									
		WATER	SUPPLY FIX UNITS	DRAINAGE FIXTURE UNITS					
		CWFU			DFU				
		(TABLE	CWFU	.75	(TABLE	DFU			
COUNT	DESCRIPTION	A-2)	TOTAL	HWFU	7-3)	TOTAL			
1	CLOTHES WASHER, DOMESTIC, STANDPIPE	4	4	3	3	3			
2	FLOOR DRAIN		0	0	2	4			
3	LAVATORY	1	3	2.25	1	3			
1	MOP SINK	3	3	2.25	3	3			
1	SHOWER, PER HEAD	2	2	1.5	2	2			
1	SINK	2	2	1.5	2	2			
3	WATER CLOSET, FLUSH TANK	2.5	7.5	0	4	12			
FIXTURE U	NIT COUNT TOTALS:		21.5	10.5		29			

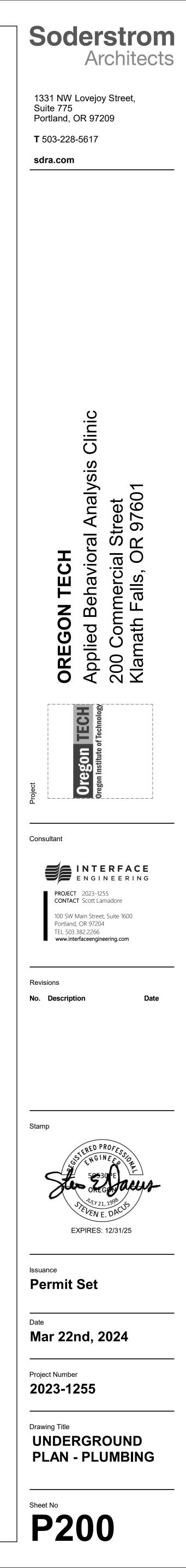


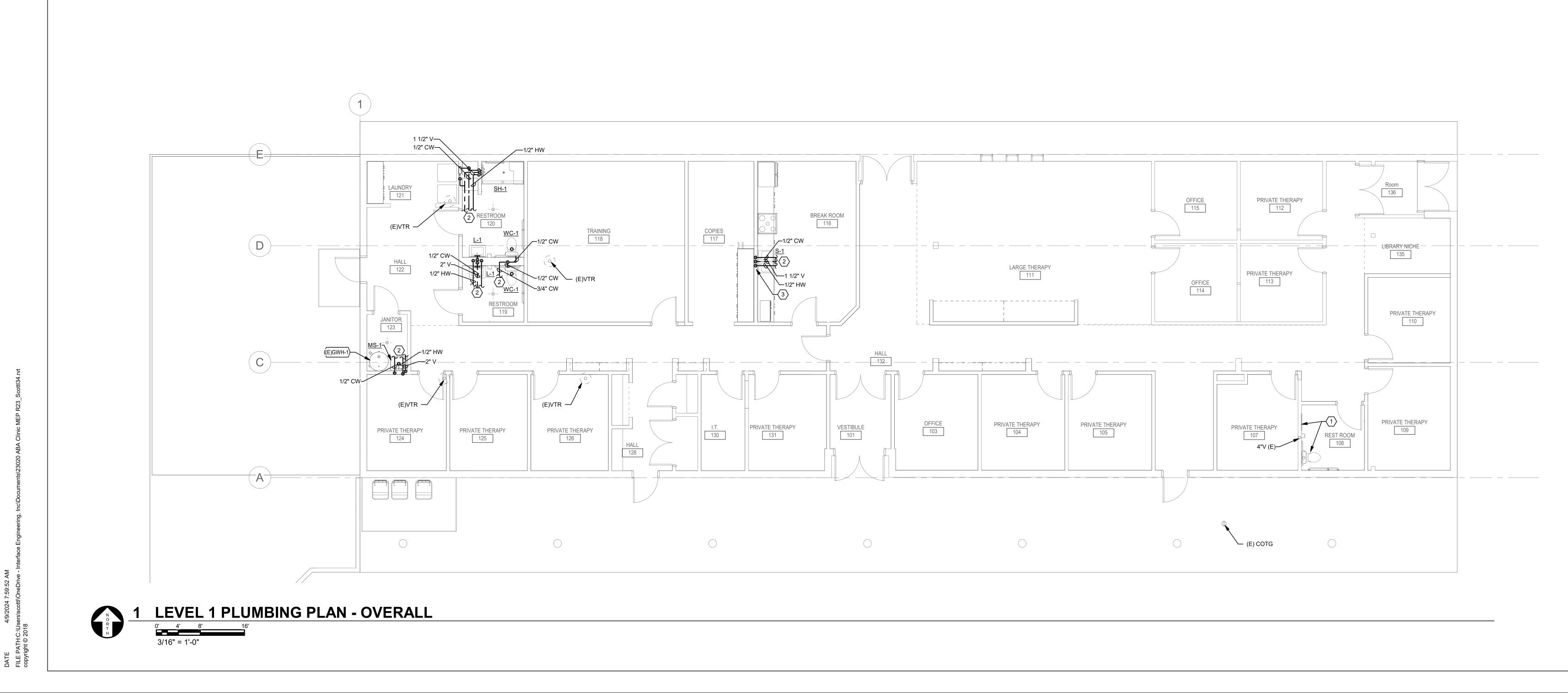


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○ <u>SHEET KEYNOTES</u>

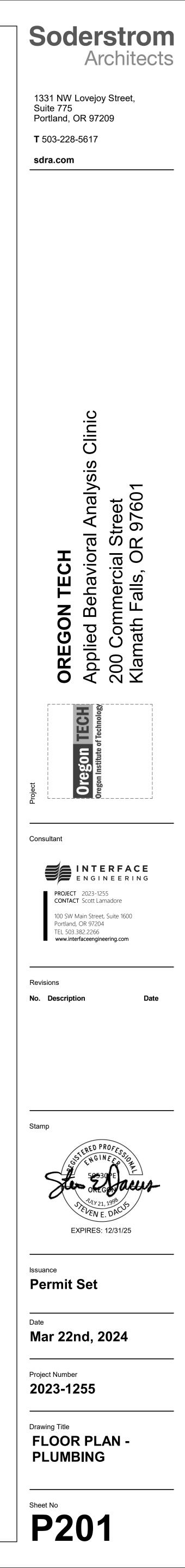
1. CONNECT NEW SANITARY PIPING TO EXISTING SANITARY AS REQUIRED.





○ <u>SHEET KEYNOTES</u>

- 1. EXISTING FIXTURES TO REMAIN IN PLACE.
- 2. CONNECT NEW HOT/COLD AND VENT PIPING TO EXISTING PIPING, AT THIS APPROXIMATE LOCATION.
- ROUTE 1/2" HOT WATER SUPPLY PIPING TO CONNECTION WITH DISHWASHER, ROUTE DRAIN PIPING HIGH BENEATH CASEWORK TO A DECK MOUNTED AIR GAP FITTING TO TERMINATION TO SINK TAIL PIECE.



SECTION 00 9111

ADDENDUM NUMBER 1

PART 1 GENERAL

1.01 PARTICULARS

- A. DATE: April 15, 2024
- B. PROJECT: OIT Applied Behavioral Analysis Clinic
- C. PROJECT NUMBER: 23020
- 1.02 TO: PROSPECTIVE BIDDERS:
 - A. This Addendum forms a part of the Contract Documents and modifies the Bidding Documents dated March 22, 2024, with amendments and additions noted below and specifications sections and drawings enclosed or attached.
- PART 2 AMENDMENTS AND ADDITIONS
- 2.01 CLARIFYING QUESTIONS:
 - A. See responses to Bid #2024-02 Clarifying Questions 1.
- 2.02 CHANGES TO THE DRAWINGS:
 - A. ARCHITECTURAL DRAWINGS
 - 1. Revise Sheets G101, A101, A201, A202, A301, A801 per attached.
 - a. Changes made to floor plan to keep existing structural wall between Offices 114 and 155 and Private Therapy rooms 112 and 113.
 - b. Changes made to ceiling plan and lighting placement to keep existing structural wall.
 - c. Two Offices and two Private Therapy rooms switched with Large Therapy room.
 - d. New Vestibule and Library Niche added along east wall.
 - e. Updates made to Door and Frame Schedule.
 - f. Updates made to Hardware Groups.
 - g. More information added about landscaping in Site Plan.
 - B. MECHANICAL DRAWINGS
 - 1. Revise Sheets M002, M201 per attached.
 - a. Vents and ducts rerouted to accommodate changes in floor plan to keep existing structural wall.
 - C. ELECTRICAL DRAWINGS
 - 1. **Revise** Sheets E002, E201, E301, E501 per attached.
 - a. Lighting Plan and Power Plan adjusted to accommodate changes in floor plan. Luminaire Schedule updated.
 - D. PLUMBING DRAWINGS
 - 1. **Revise** Sheets P002, P200, P201 per attached.
 - a. Notes about fixtures and sanitary piping in Restroom 108 updated.

END OF ADDENDUM NUMBER 1